Welcome

Congratulations on your purchase of this Sony VAIO® computer, and welcome to the online VAIO® Computer User Guide. This user guide provides detailed information on all aspects of using your new VAIO computer, from keyboard functions to preinstalled software programs.
In the left navigation window, click the topics you want to learn more about, and that information will be displayed in this main window.

View the Electronic Flyer, which provides updates and supplemental information about your computer.

Go to the Sony Computing Support Site to view the VAIO® Computer Specifications, which list your computer's hardware specifications and preinstalled software information.

Caring for Your Computer

This section provides information on how to safely use your Sony computer.

Applying Ergonomics

Your computer is a portable device and can be used in a variety of environments. Whenever possible, you should apply the following ergonomic considerations:

- **Position of your computer —** Place the computer directly in front of you as you work. Keep your forearms horizontal, with your wrists in a neutral, comfortable position while using the keyboard, touch pad, or external mouse. Let your upper arms hang naturally at your sides. Take breaks during sessions with your computer. Excessive use of the computer may strain muscles or tendons.

- **Furniture and posture —** Sit in a chair with good back support and armrests. Adjust the level of the chair so your feet are flat on the floor. A footrest may make you more comfortable. Sit in a relaxed, upright posture and avoid slouching forward or leaning far backward.

- **Viewing angle of the computer's display —** Tilt the display to find the best viewing angle. Also try adjusting the brightness setting of the display. Following these suggestions can reduce eye strain and muscle fatigue.

- **Lighting —** Choose a location where windows and lights do not create glare or reflection on the display. Use indirect lighting to avoid bright spots on the display. You can purchase accessories for your display that help reduce glare. Proper lighting adds to your comfort and work effectiveness.

- **Placement of an external display —** When using an external display, set the display at a comfortable viewing distance. Make sure the display screen is at eye level or slightly lower when you are sitting in front of the monitor.

Storing Your Computer

- Do not use or store your computer in a location subject to:
  - Heat sources, such as radiators or air ducts
  - Direct sunlight
  - Excessive dust
  - Moisture or rain
  - Mechanical vibration or shock
  - Strong magnets or speakers that are not magnetically shielded
  - Ambient temperature higher than 95ºF (35ºC) or less than 40ºF (5ºC)
  - High humidity
- Do not place electronic equipment near your computer. When running, the computer's electromagnetic field may cause other electronic equipment in close proximity to malfunction.
- Provide adequate air circulation to prevent internal heat buildup. Do not place your computer on porous surfaces such as rugs or blankets, or near materials such as curtains or draperies that may block ventilation. Leave a space of at least 8 inches (20 cm) behind the back of the computer.
- If the computer is brought directly from a cold location to a warm one, moisture may condense inside your computer. In this case, allow at least one hour before turning on your computer. If any problems occur, unplug your computer, and contact your Sony Service Center.
- The computer uses high-frequency radio signals and may interfere with radio or TV reception. Should this occur, move the computer a suitable distance away from the radio or TV.
- Do not drop the computer or place heavy objects on top of the computer.

Using Cables and Connections

- Use only specified peripheral equipment and interface cables.
- Do not use cut or damaged connection cables.
- If the telephone company makes a service call to your home or office and determines that your computer is responsible for a problem, the telephone company may bill you for the service call. Also, if you do not disconnect your computer when it is adversely affecting a telephone line, the telephone company has the right to disconnect your service until you correct the problem.

Cleaning Your Computer

- Clean the computer with a soft, dry cloth or a soft cloth lightly moistened with a mild detergent solution. Do not use any type of abrasive pad, scouring powder, or solvent such as alcohol or benzine, as these may damage the finish of your computer. You can use canned compressed air specifically for computers to remove dust.

- If a solid object falls onto the computer or a liquid leaks into the computer, immediately turn off and unplug the computer. It is best to have the computer checked by qualified personnel before you use it again.

- Avoid rubbing the LCD screen as this can damage the screen. Use a soft, dry cloth to wipe the LCD screen or canned compressed air.

- Always disconnect the power cord before cleaning the computer.

Handling the LCD Screen

- Direct sunlight can damage the LCD. Be careful when using the computer near a window.
- Do not scratch the LCD or exert pressure on it. This can cause a malfunction.
- Using the computer in low temperature conditions may produce a residual image on the screen. This is not a malfunction. When the computer returns to normal temperature, the screen returns to normal.
- The screen becomes warm during operation. This is normal and does not indicate a malfunction.
- The LCD is manufactured using high-precision technology. You may, however, see tiny black points and/or bright points (red, blue, or green) that continuously appear on the LCD. This is a normal result of the manufacturing process and does not indicate a malfunction.

Powering Your Computer

Your VAIO® computer comes with a battery and an AC adapter. This chapter explains how to install and use these supplied accessories to power your computer. It also describes ways you can efficiently utilize the battery as a power source.

- Using AC Power
- Using the Battery
- Conserving Battery Power

Using AC Power

The supplied battery is not charged when you receive your computer. To use your computer immediately, use the supplied AC adapter as the power source. While the computer uses AC power it automatically charges the battery if it is inserted. See Using the Battery for more information on installing and using your battery.

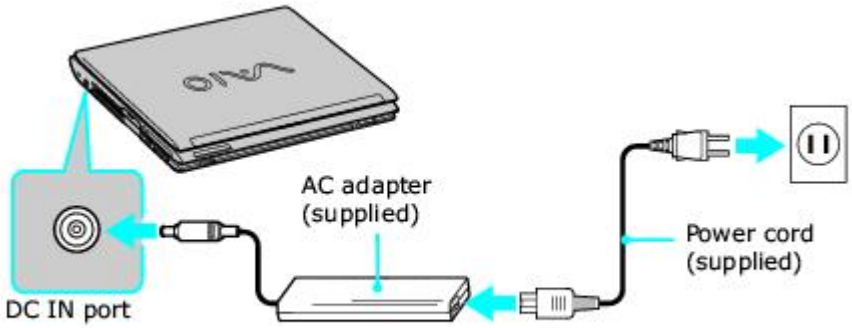
- Connecting the AC adapter
- Turning on the computer

Connecting the AC adapter

To connect the AC adapter

1. Plug the AC adapter cable into the DC IN port.

Connecting the AC Adapter to the Computer



2. Plug the power cord into the AC adapter and an AC outlet.

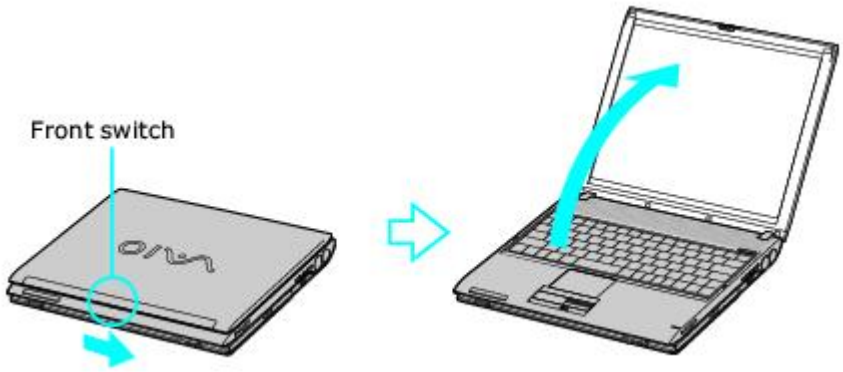
✍ Use only the supplied AC adapter with your computer.

Turning on the computer

To turn on the computer

1. Lift the lid of the computer by sliding the front switch to the right and lifting the lid. You may need to hold the bottom of the computer firmly to lift the lid.

Opening the Computer



2. Slide the power switch to the right until the power indicator turns on.

Turning on the Computer

If you slide and hold the power switch to the right, the computer turns off.

3. If the computer screen is too dark or too bright, follow these steps to adjust the brightness:

- To increase brightness, press the **Fn** and **F5** keys, and then press the **Up Arrow** ↑ or the **Right Arrow** → key.
- To decrease brightness, press the **Fn** and **F5** keys, and then press the **Down Arrow** ↓ or the **Left Arrow** ← key.

Using the Battery

Your computer comes equipped with one battery bay. For information on how to extend the life of the battery, see Conserving Battery Power.

- Inserting a battery
- Removing a battery
- Locating battery information
- Charging a battery
- Notes on batteries
- Frequently asked questions

When operating your computer on battery power, your computer's CPU speed is reduced.

The battery that comes with your computer is not fully charged at the time of purchase.

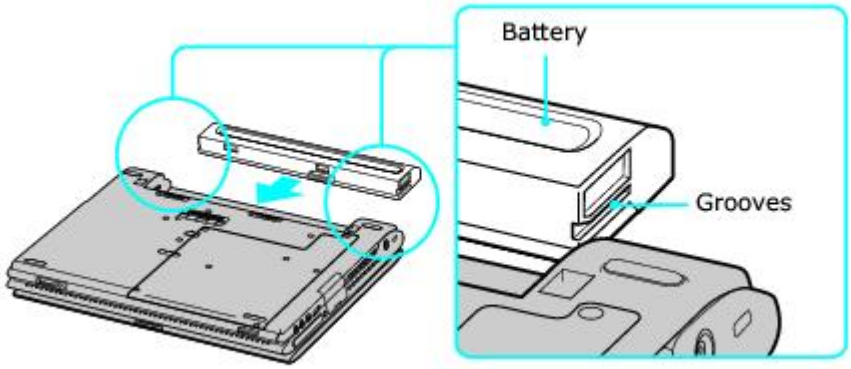
The brightness of your computer screen automatically dims when you switch from AC power to battery power. To increase the brightness, press the **Fn** and **F5** keys, and then press the **Up Arrow** ↑ or **Right Arrow** → key.

Inserting a battery

To insert a battery

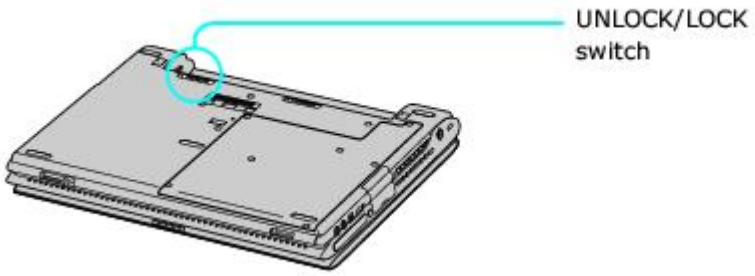
1. Turn the computer over, and slide the **UNLOCK/LOCK** switch on the bottom of the computer to the **UNLOCK** position.
2. Align the grooves on the battery with the tabs on the back of the computer.

Inserting a Battery



3. Slide the battery into the computer until it clicks into place.
4. Slide the **UNLOCK/LOCK** switch into the **LOCK** position.

Inserting a Battery



If a port replicator is attached to your computer, do not insert or remove the battery. Lifting and turning the computer with a port replicator attached could cause a temporary loss of power.

Some programs and attached devices prevent the system from automatically entering Hibernate mode. If you are using battery power, save your data frequently to avoid data loss and manually activate a power saving mode. See Using power saving modes for more information.

Removing a battery

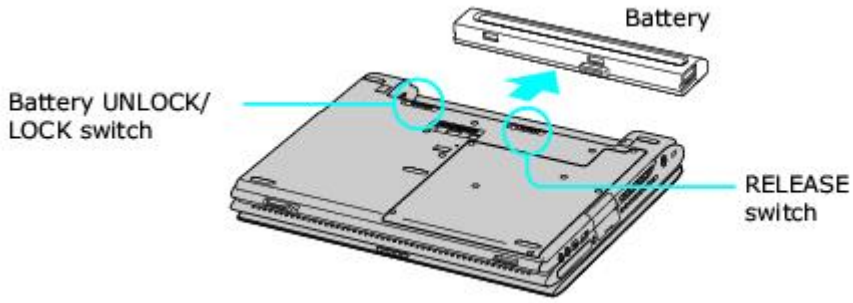
If you are not using the computer for an extended period of time, remove the battery from the computer to avoid damaging the battery. You can remove the battery when the computer is on or off.

If the computer is on, connect the AC adapter and exit a power saving mode before you remove the battery.

To remove a battery

1. Turn the computer over, and slide the **UNLOCK/LOCK** switch on the bottom of the computer to the **UNLOCK** position.
2. Push and hold the **RELEASE** switch.
3. While holding the **RELEASE** switch, slide the battery away from the computer.

Removing a Battery



Locating battery information

You can view the remaining battery charge and other battery information on the Battery Information toolbar, PowerPanel window, and Power Meter window.

The battery icons that appear on the Taskbar Notification area and Power Meter window indicate the current status of the installed battery.

Power icon	Power status
	Computer is using AC power.
	Computer is using AC power and charging the battery.
	Battery is charging.
	Battery is fully charged.
	Battery is discharging.
	No battery is inserted in the computer.

To view the Battery Information toolbar

1. Right-click the center of the Windows® taskbar.
2. Point to **Toolbars** from the shortcut menu, and click **Battery Information**. The **Battery Information** toolbar appears on the taskbar.

If the **Battery Information** toolbar is hidden behind the taskbar icons, click and drag the edge of the **Battery Information** toolbar to the left until it is in clear view.

The total charge remaining in the battery is listed in percent and real-time values. The following toolbar indicates there is 100 percent or approximately 3 hours and 40 minutes of battery charge remaining.

Battery Information Toolbar

- **Percentage indicator —** Displays the percentage of the remaining charge.
- **Time indicator —** Displays estimated time (hours : minutes) remaining before the battery fully discharges, also known as the time-to-empty.

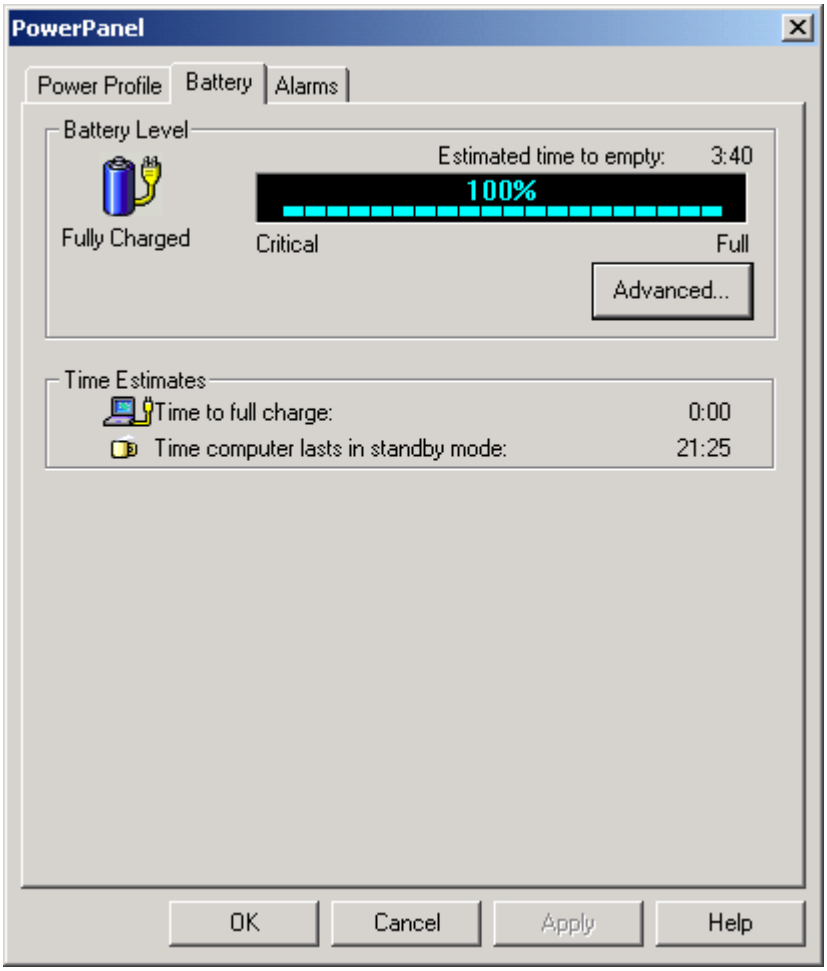
To close the Battery Information toolbar

1. Right-click the **Battery Information** toolbar.
2. Select **Toolbars** from the shortcut menu, and click to cancel **Battery Information**. The **Battery Information** toolbar disappears from the toolbar.

To view the PowerPanel window

- Double-click the **CPU** icon on the **Taskbar Notification** area. The **PowerPanel** window appears.

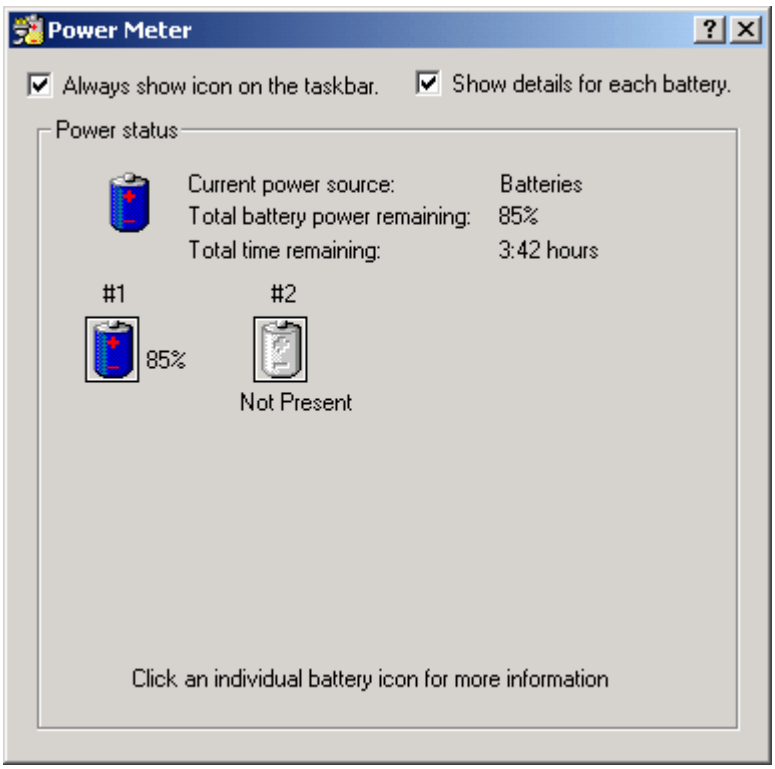
PowerPanel



To view the Power Meter window if you are using battery power

- Double-click the battery icon in the **Taskbar Notification** area. The **Power Meter** window appears.

Power Meter



Charging a battery

You will need to charge the battery if battery power drops below 10 percent or you have not used the battery for a long time. The lithium-ion battery supplied with your computer may be recharged at any time, whether you wait until the battery is completely or partially discharged. Charging a partially discharged battery does not affect battery life. If you charge the battery and find that battery power is still low, the battery may be reaching the end of its life, and you may need to replace it.

The battery supplied with your computer is not charged at the time of purchase.

To charge a battery

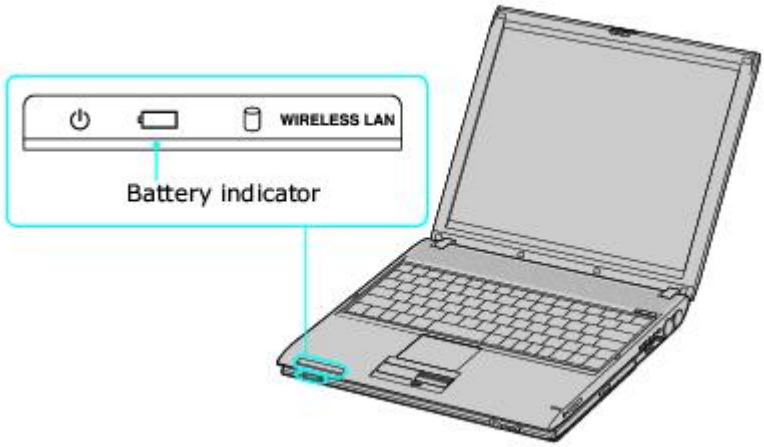
You can charge the battery when the computer is on or off. However, the battery will charge faster when the computer is off. Charging the battery takes several hours.

Charge the battery at temperatures between 50°F and 80°F (10°C to 30°C). Lower temperatures require more time to charge.

1. Insert the battery into the battery bay.
2. Connect the AC adapter to the computer. The computer automatically charges the battery as long as the computer is using AC power.

The battery indicator blinks while the battery charges. The battery indicator stops blinking when the battery is fully charged.

Battery Indicators



Battery indicator status	Description
On	The computer is using battery power.
Single blink	The battery is running out of power.
Double blink	The battery is charging.
Off	The computer is using AC power.

Notes on batteries

- Never leave the battery in temperatures above 140°F (60°C), such as under direct sunlight or in a car parked in the sun.
- While the battery is in use or being discharged, the battery heats up. This is normal and is not cause for concern.
- Keep the battery away from all heat sources.
- Keep the battery dry.
- Do not open or disassemble the battery.
- Do not expose the battery to any mechanical shock.
- Battery life is shorter in a cold environment.

Frequently asked questions

How do I know when the battery is charged?

To determine the remaining battery charge, see Locating battery information.

When is the computer using AC power?

When the computer is directly connected to the AC adapter, it uses AC power, even if a battery is installed.

When should I recharge the battery?

- When the battery level falls below 10 percent.
- When both the battery and power indicators blink.
- When you have not used the battery for a long time.

When should I replace the battery?

If, after charging the battery, the battery power is still low, the battery may be reaching the end of its life and should be replaced.

Should I be concerned that the installed battery is warm?

No, it is normal for the battery to be warm when it is powering the computer.

Conserving Battery Power

You may use the power saving modes and PowerPanel utility or power schemes to conserve battery power. Conserving battery power may significantly extend your computing time, depending on how you use your computer.

- Using power saving modes
- Using PowerPanel utility
- Frequently asked questions

Using power saving modes

In addition to the normal operating mode, which allows you to turn off specific devices, your computer has two distinct power saving modes: Standby and Hibernate. Use the Standby and Hibernate power saving modes to override a profile setting or initiate an immediate action.

- Standby — Saves the state of the system and attached devices in memory (RAM). Power consumption is reduced to a minimum. The system remains on, and the computer screen (LCD) is off.

- Hibernate — Saves the state of the system and attached devices to the hard disk. Power consumption is completely off. Your computer enters Hibernate mode when the remaining battery charge drops below 5 percent, regardless of the setting you select.

✍ Since some software programs and attached devices prevent the system from entering Hibernate mode, save your data frequently to avoid data loss.

To activate Standby mode

1. Press the **Fn** and **Esc** keys. The power indicator blinks in this mode.

2. Press any key to return to normal mode.

To activate Hibernate mode

1. Press the **Fn** and **F12** keys. Do not move the computer until the power indicator turns off.

2. Move the power switch to the right to return to normal mode.

✍ If the computer does not activate Hibernate mode, see Frequently asked questions for more information.

Using PowerPanel utility

The PowerPanel utility enables you to select and customize a predefined power management profile to conserve battery life. The following table describes all the predefined power management profiles in PowerPanel. You can customize the settings for all of the following profiles, except the Disable Power Management profile.

Profile

Icon **Description**

Maximum Performance
Provides the best system performance but conserves minimal power.

Maximum Battery Life
Provides power saving features to give maximum battery life and good performance. It slows the computer and puts it into Standby mode after a specified time.

Ultimate Battery Life
Extends the Maximum Battery Life by stopping power to the optical drive.

Power Management Off
Disables all power management settings, such as Standby and Hibernate modes. You cannot change the settings of this profile.

AC Power
Indicates when AC power is in use. Similar to the Power Management Off setting. Power Management automatically loads the AC profile unless you disable this feature.

Games
Disables the display and the Hard Disk Standby timer.

Presentation
Keeps the display on at all times while conserving power. This option is ideal for slide show presentations. You can establish settings for LCD (Video) Standby, Hard Disk Standby, and Standby mode to optimize power management for your system.

Camera
Optimizes performance and power requirements for camera usage.

DVD
Optimizes performance and power requirements for DVD usage.

Word Processing
Optimizes power management with longer time-outs on the hard disk and display screen. You can also establish settings for LCD (Video) Standby, Hard Disk Standby, and Standby mode to optimize power management for your system.

Spreadsheet
Optimizes performance and power requirements for spreadsheet programs.

Communications
Extends battery life by initiating a quick display time-out. The Internal modem remains powered on. You can also establish settings for LCD (Video) Standby, Hard Disk Standby, and Standby mode to optimize power management for your system.

Automatic Profile Selection
Automatically selects a profile suitable for active software programs.

✍ Do not choose the Automatic Profile Selection when connected to AC power.

To select a profile

1. Right-click the **CPU** icon on the **Taskbar Notification** area. See To view the PowerPanel window for Battery icon descriptions.
2. Select **Profiles**, and click the profile on the shortcut menu. The profile settings are implemented instantly. See Using PowerPanel utility for descriptions of available profiles.

   When you use the battery to power your computer, your system automatically selects the Maximum Battery Life power management profile by default. If you select a different power management profile while using battery power, that profile is selected automatically the next time you use the battery to power your computer.

   See PowerPanel Help for information on customizing the power management profiles.

To customize your profile settings

You can customize your profile settings to sustain enough power for a particular computing function.

1. Right-click the **CPU** icon on the **Taskbar Notification** area. See To view the PowerPanel window for Battery icon descriptions.
2. Select **Edit/Create Profiles** from the shortcut menu.
3. In the left panel, click the profile you want to change.
4. Right-click the setting under **System**, **LCD(Video)**, **Hard Disk**, or **Other Devices** that you want to change. See the following table for a description of each power profile.
5. Make your changes from the drop-down menu.
6. Click **File**, and click **Save**.

Power profile settings	Description
CPU Control[1]	Controls the processor speed. You can select either **Battery Life** or **More Battery Life**. These selections are listed in order from the greatest to least amount of power consumed.
System Standby Timer	Controls the time it takes the system to activate the Standby mode when it is idle. The longer you allow the computer to sit idle while it is not in a power saving mode the more power the computer consumes.
Hibernate Timer	Controls the time it takes the system to activate the Hibernate mode when it is idle. The longer you allow the computer to sit idle while it is not in a power saving mode the more power the computer consumes. Hibernate mode conserves more power than Standby mode.
Thermal Control Strategy[1]	(On selected models) Controls the speed of the processor fan. You can set the fan speed to **Quiet**, which conserves the most power, or **Performance**.
Lid Close Action	Controls the state of your system when you close the computer's lid. You can select either **Standby** or **Hibernate** mode, or you can select **LCD Off**. Hibernate or LCD Off conserves the most power.
Hibernate on Low Battery	Controls the state of your system when the battery power is low. You can turn this setting **On** or **Off**. Selecting On conserves the most power when the battery is low.
LCD Brightness	Controls the brightness of the computer screen (LCD). You can select a brightness level of one to nine, with one being the darkest setting. The darker you set the computer screen the more power you conserve.
LCD Standby Timer	Controls the time it takes the system to turn off power to the computer screen (LCD) when the system is idle. The system itself still functions on full power.

HDD Standby Timer Controls the time it takes the system to turn off power to the hard disk drive when the system is idle. This setting only turns off power to the hard disk drive.

[1] Slows the processor speed. On selected models only.

Frequently asked questions

Can my computer enter Hibernate mode while using battery power?

Your computer can enter Hibernate mode while using battery power, but some programs and peripheral devices prevent the system from entering Hibernate mode. If you are using a program that prevents the system from entering Hibernate mode, save your data frequently. See To activate Hibernate mode for information on how you can manually activate Hibernate mode.

Why can't my computer enter Hibernate mode?

You may first need to enable Hibernate mode. Follow these steps:

1. Click **Start** on the Windows® taskbar, and select **Settings**, **Control Panel**, and then click **Power Options**. The **Power Options Properties** window appears.
2. Select the **Hibernate** tab.
3. Click to select the **Enable hibernate support** check box.

Internet and Network Connections

- Internet Connections
- Network Connections

Internet Connections

This section describes the basic steps for setting up your dial-up or Ethernet connection to the Internet. The Internet Connection Wizard guides you through the process of connecting to the Internet and choosing an Internet service provider (ISP) or setting up an existing account. When you connect to the Internet, you can register your VAIO® computer, use online services, and gain access to Sony Computing Support.

- Setting up a dial-up Internet connection
- Setting up an Ethernet Internet connection
- Customizing your Internet connection
- Frequently asked questions

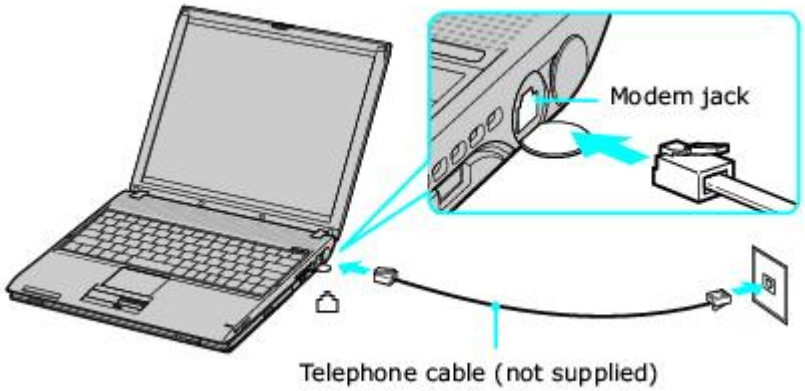
Setting up a dial-up Internet connection

Before you can connect to the Internet, you need to connect your computer to a telephone line via a telephone cable (not supplied). Once you set up your telephone cable, you're ready to connect to the Internet.

To connect a telephone cable

1. Locate the Modem jack on your computer. For location information, see Locating Ports and Controls in the Setting Up chapter of your printed VAIO® Computer Quick Start.
2. Plug one end of the telephone cable into the Modem jack. Make sure it clicks into place.
3. Plug the other end into the wall jack.

Connecting a Telephone Cable



Your computer does not work with party lines, cannot be connected to a coin-operated telephone, and may not work with multiple telephone lines or a private branch exchange (PBX). Some of these connections may result in excess electrical current and could cause a malfunction in the internal modem.

If you connect a telephone cable coming through a splitter, the modem or connected device may not work properly.

To set up a dial-up connection to the Internet

1. Connect your computer to a telephone line. See To connect a telephone cable for more information.
2. Click **Start**, point to **Programs**, **Accessories**, **Communications**, and click **Internet Connection Wizard**. The **Internet Connection Wizard** appears.

Internet Connection Wizard

3. Click **Next**. If the **Location Information** dialog box appears, follow the on-screen instructions and close the window.
4. Follow the on-screen instructions.

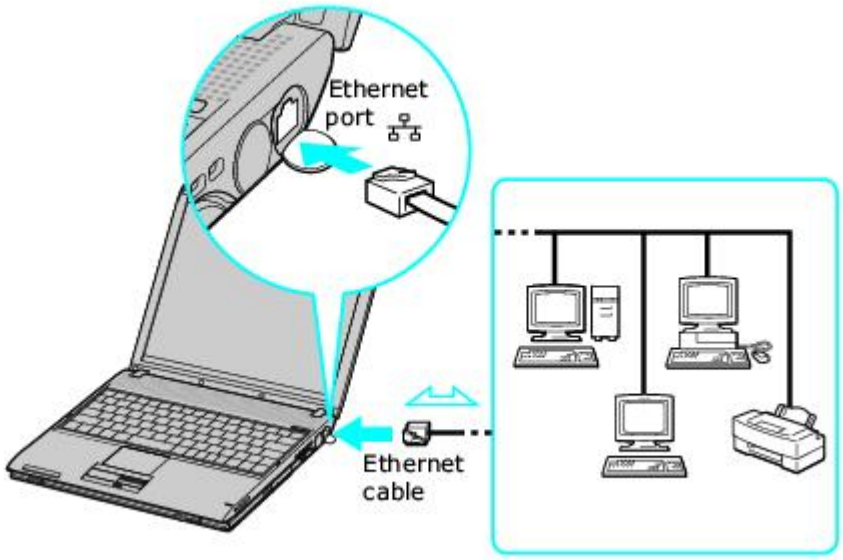
Setting up an Ethernet Internet connection

Your computer accommodates both 10BASE-T and 100BASE-TX Ethernet connections, with data transfer speeds of between 10 and 100 Mbps.

To connect an Ethernet cable

1. Locate the Ethernet port on your computer. For location information, see "Locating Controls and Ports" in the Setting Up chapter of your printed VAIO® Computer Quick Start.

Connecting an Ethernet Cable



2. Plug one end of the Ethernet cable into your computer's Ethernet port and the other end into the network connection.

To set up an Ethernet connection to the Internet

1. Connect your computer to a network connection. See To connect an Ethernet cable for more information.

2. Click **Start**, point to **Programs**, **Accessories**, **Communications**, and click **Internet Connection Wizard**. The **Internet Connection Wizard** appears.

Internet Connection Wizard

3. Click **I want to set up my Internet connection manually, or I want to connect through a local area network (LAN)**.

4. Click **Next**, and select **I connect through a local area network (LAN)**.

5. Click **Next**, and follow the on-screen instructions.

Customizing your Internet connection

The Internet Properties dialog box enables you to change the way you view the Internet. You can change your home page, fonts, language, and colors. You can also regulate content and set browsing preferences.

To open the Internet Properties dialog box

1. Click **Start**, point to **Settings**, **Control Panel**, and click **Internet Options**. The **Internet Properties** dialog box appears.
2. Click the tabs to view options.
3. Make changes, and click **Apply** to activate your changes.
4. Click **OK**.

Frequently asked questions

Why doesn't my modem work?

- Make sure the telephone cable is securely plugged into the Modem jack on the computer and the wall jack. See To connect a telephone cable for more information.
- Make sure the telephone cable is working. Plug the cable into an ordinary telephone and listen for a dial tone.
- Make sure the telephone number the program is dialing is correct.
- Make sure the program you are using is compatible with the computer's modem. (All preinstalled Sony programs are compatible.)

Why is my modem connection slow?

Your computer is equipped with a V.90 compatible modem. Many factors may influence modem connection speed, including telephone line noise or compatibility with telephone equipment, such as fax machines or other modems. If you think your modem is not connecting properly to other PC-based modems, fax machines, or your Internet Service Provider (ISP), follow these steps:

- Ask your telephone company to verify your telephone line is free of any line noise.
- If your problem is fax-related, make sure there are no problems with the fax machine you are calling and that it is compatible with fax modems.
- If you are having a problem connecting with your ISP, make sure the ISP is not experiencing technical problems.
- If you have a second telephone line, try connecting the modem to that line.

Network Connections

With a Sony computer, you can easily set up or connect to a variety of networks. The Network Connection Wizard makes it easy to gain access to remote and local area networks (LANs) using Ethernet or dial-up connections.

For more information about networking, click **Start**, **Help**, and then **Networking**.

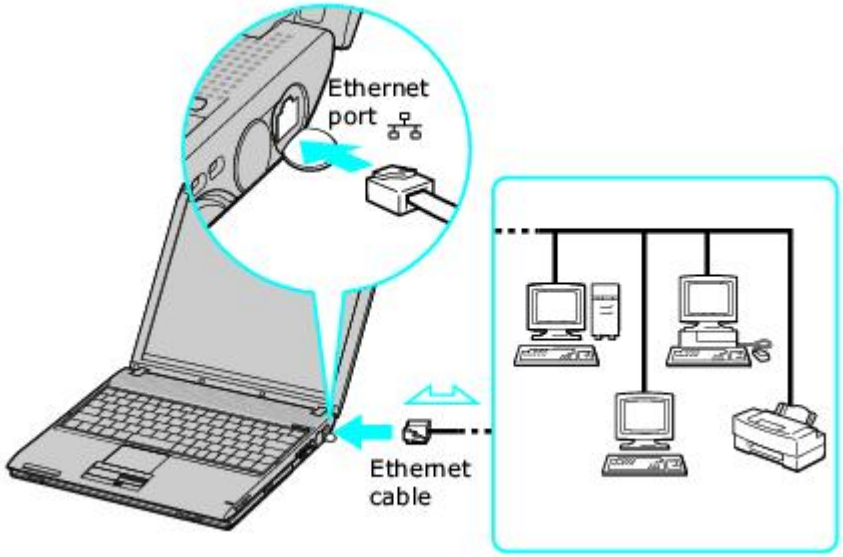
Using Ethernet connections

For setting up local area networks (LANs), Ethernet is a widely installed technology. Your computer accommodates both 10BASE-T and 100BASE-TX Ethernet connections, with data transfer speeds of between 10 and 100 Mbps.

To connect to a local area network using a telephone or Ethernet cable

1. Connect your computer to a network connection. See To connect an Ethernet cable for more information.

Connecting an Ethernet Cable



2. Click **Start**, point to **Programs**, **Accessories**, **Communications**, and click **Internet Connection Wizard**. The **Internet Connection Wizard** appears.

Internet Connection Wizard

3. Click **I want to set up my Internet connection manually, or I want to connect through a local area network (LAN)**.

4. Click **Next**, and select **I connect through a local area network (LAN)**.

5. Click **Next**, and follow the on-screen instructions.

Only connect 10BASE-T and 100BASE-TX cables to the Ethernet port. Do not connect any other type of network cable or any telephone cable. Connecting cables other than those listed above may result in an electric current overload and could cause a malfunction, excessive heat, or fire in the port. To connect the unit to the network, see Using Ethernet connections or contact your network administrator.

You can connect to your company network from a remote location and use data, programs, and network resources. See Microsoft® Windows® Help by clicking **Help** from the **Start** menu, and then clicking **Networking** in the left panel.

To connect to a remote network using a telephone or Ethernet cable

1. Connect an Ethernet or telephone cable to your computer. See To connect an Ethernet cable and Setting up a dial-up Internet connection for more information.

2. From the **Start** menu, point to **Programs**, **Accessories**, **Communications**, and click **Networking and Dial-up Connections**. The **Networking and Dial-up Connections** window appears.

3. Click **Make New Connection**. The **Networking Connection Wizard** appears.

4. Click **Next**. If you are prompted to the **Local Information** dialog box, follow the on-screen instructions, and then close the window.

5. Click **Connect to the network at my workplace**, and then click **Next**.

6. Follow the on-screen instructions.

7. Ask your network administrator for the detailed settings and devices needed to connect to an existing network.

CDs and DVDs

- Inserting and Ejecting CDs or DVDs
- Writing To and Playing CDs
- Playing DVDs

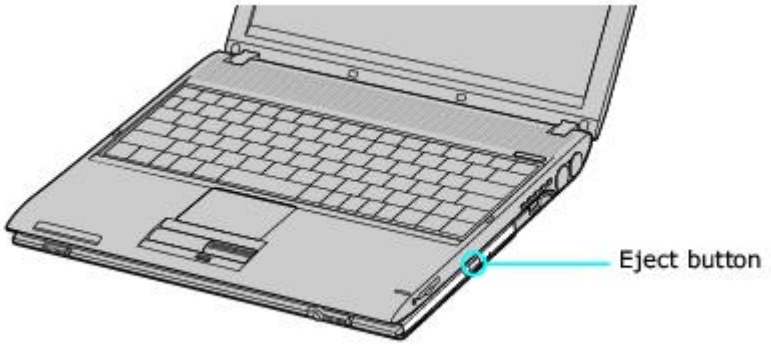
Inserting and Ejecting CDs or DVDs

Avoid using adhesive labels to identify your CDs or DVDs. Adhesive labels may damage the optical drive if they come off while the disc is in the drive.

To insert a disc

1. Turn on the computer or exit a power saving mode (Standby or Hibernate) if one is active. For more information, see Using power saving modes.
2. Press the Eject button on the optical drive cover to open the drive tray. The drive tray slides out.

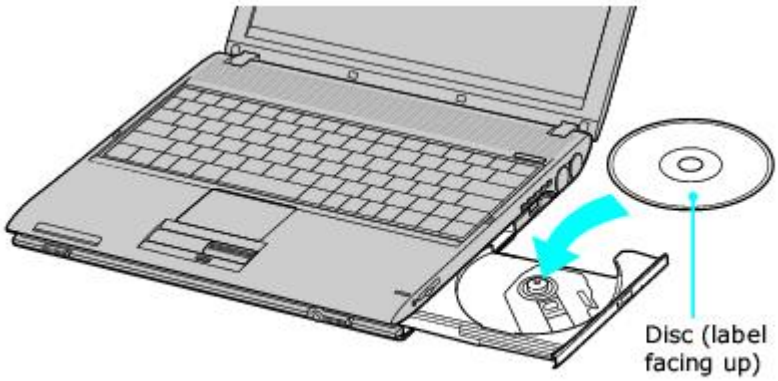
Ejecting the Drive Tray



3. Place a disc on the drive tray with the label facing up.

You can play some DVDs on both sides. Insert this type of DVD with the label side you want to play facing up.

Inserting a Disc



4. Press the disc onto the tray until the disc clicks securely into place.

If you do not seat the disc firmly over the hub, the disc may come loose while it is in the drive. A loose disc may damage the optical drive and make opening the drive tray difficult.

5. Push the drive tray gently to close it. The Busy indicator on the drive cover blinks while your computer is reading data from the drive.

To eject a disc

1. Turn on the computer or exit a power saving mode (Standby or Hibernate) if one is active. For more information, see Using power saving modes.
2. Close all programs that access the optical drive, and wait for the Busy indicator on the drive cover to turn off.
3. Press the Eject button on the drive cover to open the drive tray. The drive tray slides out.

If the Eject button does not work, turn off the computer and insert a thin, straight object (such as a paperclip)

into the manual eject hole next to the Eject button.

4. Lift the disc from the drive.

5. Push the drive tray gently to close it.

Writing To and Playing CDs

Your computer comes equipped with a CD-RW/DVD drive, which plays DVD and most DVD-R discs, and reads and writes data to CD-R and CD-RW discs.

- Playing CDs
- Writing data to a CD-RW or CD-R
- Frequently asked questions

Do not remove the optical drive when the computer is in a power saving mode (Standby or Hibernate). Doing so may cause the computer to malfunction.

Playing CDs

Before you play an audio CD, you may need to enable your drive's digital CD audio feature.

To enable the audio feature

1. Click **Start** on the Windows® taskbar, and point to **Settings**, **Control Panel**, and click **System**. The **System Properties** dialog box appears.

   As a shortcut, you can press **Fn** + the **Windows** key + **Insert** to open the **System Properties** dialog box.

2. Select the **Hardware** tab, and in the **Device Manager** box, click **Device Manager**. A window with a listing of the computer's hardware devices appears.
3. Double-click **DVD/CD-ROM drives** to open the submenu.
4. Right-click the listed drive name, and select the **Properties** tab.
5. Click to select the **Enable digital CD audio for this CD-ROM device** check box if it is not already selected.
6. Click **OK**.

To adjust the volume for playing CDs and DVDs

Some programs have built-in volume controls, which you can adjust. If there are no volume controls, then adjust the volume of your computer's built-in speakers by doing one of the following:

- Using the Function keys. An on-screen display may appear, notifying you when a change occurs.
  - To increase volume, press the **Fn** and **F4** keys, and then press ↑ or →.
  - To decrease volume, press the **Fn** and **F4** keys, and then press ↓ or ←.
- Using the Volume icon.
  - Double click the **Volume** icon on the **Taskbar Notification** area. The **Volume Control** dialog box appears.
  - In the **Volume Control** and **CD Audio** columns, move the **Volume** sliders up to increase volume and down to decrease volume.

To play an audio CD

1. Insert the disc into the optical drive. See To insert a disc.
2. If nothing appears on the desktop once you insert an audio CD disc, then click **Start**, point to **Programs**, and click to open a CD program, such as SonicStage.

Writing data to a CD-RW or CD-R

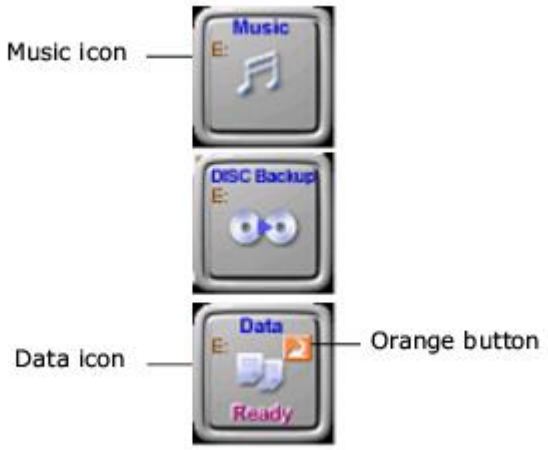
You can copy files to CD-R or CD-RW discs if your VAIO® computer is equipped with a CD-RW/DVD, DVD-RW, or DVD±RW drive. Before you write data to a CD-RW or CD-R disc, read the following notes to avoid a computer malfunction and ensure the best writing results:

- Deactivate the screen saver and exit anti-virus software.
- Deactivate memory-resident disc utilities to avoid data loss.
- Disable the FindFast program if it is installed on your computer. Click **Start** and point to **Programs** to see a list of programs on your computer.
- Connect and use the AC adapter to power your computer or make sure your battery is at least 50 percent charged. See Powering Your Computer for more information.
- Use CD-R discs that are compatible with 8x speed.

To copy files or folders to a CD-RW or CD-R

1. Insert a blank CD-R or CD-RW into the optical drive. For more information, see Inserting and Ejecting CDs or DVDs.
2. Launch a CD program, such as Drag'n Drop CD. Click **Start** on the Windows® taskbar and point to **Programs** to locate the program.
3. Select the files or folders you want to copy and drag them onto one of these Drag'n Drop CD icons:
   - The **Music** icon for audio files. An orange button appears.
   - The **Data** icon for data files. An orange button appears.

Drag'n Drop CD Icons



4. Click the orange button to begin copying the files.

To view the help guide

1. Click **Start**, and point to **Programs**, and then **Drag'n Drop CD**.
2. Click to open **Drag'n Drop CD** contained within the submenu.

Playing DVDs

You can play DVDs in your computer's optical drive and view the video on the computer screen. The type of optical drive installed in or connected to your computer may vary, depending on the model you purchased.

- Playing DVDs on your computer
- Frequently asked questions

Playing DVDs on your computer

Your computer is equipped with an optical drive that enables you to watch DVDs and most DVD-R discs on your computer.

To play a DVD while using AC power

1. Close all open programs.
2. Insert the DVD into the optical drive.
3. Open a preinstalled DVD program, such as WinDVD, by following these steps:
    1. Click **Start** on the taskbar, and point to **Programs**.
    2. Select a program, such as InterVideo WinDVD, to play the DVD. For instructions on how to use a program, see the help guide included with the DVD program.

To play a DVD while using battery power

1. Set the power management profile to **DVD**.
    1. Close all open programs.
    2. Right-click the **CPU** icon on the **Taskbar Notification** area.
    3. Select **Edit/Create Profiles** from the shortcut menu.
    4. Select **DVD** from the menu on the left.
2. Insert the DVD into the optical drive.
3. Open a preinstalled DVD program, such as WinDVD, by following these steps:
    1. Click **Start** on the taskbar, and point to **Programs**.
    2. Select a program, such as WinDVD, to play the DVD. For instructions on how to use a program, see the help guide included with the DVD program.

Some discs recorded at 20 or 24 bits may produce noise while playing. If you have audio devices connected, this may damage your hearing and the speakers. Reduce the volume before playing a DVD.

Do not switch power saving modes while the computer is playing a DVD.

Do not use memory-resident utility software to speed up disc access when playing a DVD. This may cause the computer to malfunction.

Frequently asked questions

How do I maintain CDs and DVDs?

- Avoid touching the surface of the disc with your fingers. Fingerprints and dust on the surface of the disc may cause reading errors.
- Try using canned compressed air to clean dusty discs.
- Do not clean the disc with solvents (such as benzine, thinner, alcohol, commercially available cleaners, or anti-static spray), which may damage the disc. To clean the disc, follow these steps:
  1. Hold the edge of the disc, and use a soft cloth to wipe the surface from the center out.
  2. If the disc is badly soiled, moisten a soft cloth with water, wring it out well, and use it to wipe the surface of the disc from the center out.
  3. Wipe off any remaining moisture with a dry, soft cloth.
- Do not drop or bend the disc.

Why does my computer freeze when I try to read a disc?

- The disc your computer is trying to read may be dirty or damaged. Follow these steps:
  1. Restart the computer by clicking **Start**, **Shut Down**, and selecting **Restart**.
  2. Eject the disc from the optical drive.
  3. Examine the disc for dirt or damage. If the disc is dirty, see How do I maintain CDs and DVDs? for instructions on how to clean it.

What do I do if the drive tray won't open?

- Make sure the computer is on.
- Press the Eject button on the optical drive.
- If the Eject button does not work, click **My Computer** on the desktop. Right click the optical drive icon, and select **Eject** from the shortcut menu.
- If none of the above options work, insert a thin, straight object (such as a paper clip) in the manual eject hole to the right of the Eject button.

Why won't the optical drive work?

If you are using the battery to power your computer, the battery profile may be set to Ultimate Battery Life. In order to extend battery life, this profile does not provide power to the optical drive. You can either customize the Ultimate Battery Life profile to provide power to the optical drive or select a different power management profile.

To customize the Ultimate Battery Life profile

1. Right-click the **CPU** icon on the **Taskbar Notification** area and select **Edit/Create Profiles** from the shortcut menu.
2. In the left panel, click **Ultimate Battery Life**.
3. In the right panel, right click **Power-saving Mode** and select **Off**.

To select a different power management profile

1. Right-click the **CPU** icon on the **Taskbar Notification** area.
2. Point to **Profiles**, and click to select a profile from the menu.

   For more information about power management profiles, see Using PowerPanel utility.

What do I do if the optical drive isn't playing my CD or DVD properly?

- Make sure the disc was inserted into the drive with the label facing up.
- Make sure the necessary program(s) is installed according to the manufacturer's instructions.
- If the CD or DVD is dirty or damaged, the computer will stop responding. Follow these steps:

  1. Restart the computer by pressing **Ctrl+Alt+Delete** and clicking **Shut Down**. From the **Shut Down Windows** dialog box, select **Restart**.
  2. Remove the CD or DVD from the optical drive.
  3. Check the disc for dirt or damage. If you need to clean the disc, see How do I maintain CDs and DVDs? for instructions.

- If you are playing a CD or DVD and cannot hear sound, follow these steps:

  1. Double-click the **Volume** icon on the **Taskbar Notification** area, and click to cancel the **Volume Control** and **CD Audio Mute** check boxes.
  2. Check the volume setting in the audio mixer.
  3. If you are using external speakers, check the volume settings on the speakers and the connections between the speakers and the computer.
  4. Make sure the CD audio feature is enabled and the correct driver software is installed. Follow these steps:

     1. Click **Start** on the Windows® taskbar, and point to **Settings**, **Control Panel**, and click **System**. The **System Properties** dialog box appears.

        As a shortcut, you can press **Fn** + the **Windows** key + **Insert** to open the **System Properties** dialog box.

     2. Select the **Hardware** tab, and click **Device Manager** in the **Device Manager** box. A window with a listing of the computer's hardware devices appears.

        If a "X" or an exclamation point appear on the listed device, you may need to enable the device or reinstall the drivers.

     3. Double-click the optical drive to open the submenu.
     4. Double-click the listed drive name, and select the **Properties** tab.
     5. Click to select the **Enable digital CD audio for this CD-ROM device** check box, if it is not selected.

        You can confirm the driver software by selecting the **Driver** tab, and clicking **Driver Details**.

     6. Click **OK** to close the window.

- Make sure an adhesive label was not attached to the CD or DVD. Adhesive labels can come off while the disc is in the optical drive and damage the drive or cause it to malfunction.
- If a region code warning appears, the disc may be incompatible with the optical drive. Check the DVD package to make sure the region code is compatible with the optical drive.
- If you notice condensation on the computer, do not use the computer for at least one hour. Condensation can cause the computer to malfunction.

Why did the computer screen (LCD) go blank?

- Your computer screen may go blank if the computer has lost power or has entered a power saving mode (Standby or Hibernate). If the computer is in LCD (Video) Standby mode, press any key to activate the computer screen. See Using power saving modes for more information.
- Make sure the computer is plugged into a power source and is on. The power indicator on the computer will be on if

the computer is on.

- If your computer is using battery power, make sure the battery is inserted properly and is charged. See Using the Battery for more information.
- If the display mode is set to external display, use the **Fn+F7** key combination. See Selecting a display for more information.

Printer Connections

- Printing With Your Computer

Printing With Your Computer

Your computer is compatible with many popular printers. However, to ensure the best performance, printers must be compatible with the Microsoft® Windows® operating system installed on your computer.

- Connecting a printer
- Disconnecting a printer
- Frequently asked questions

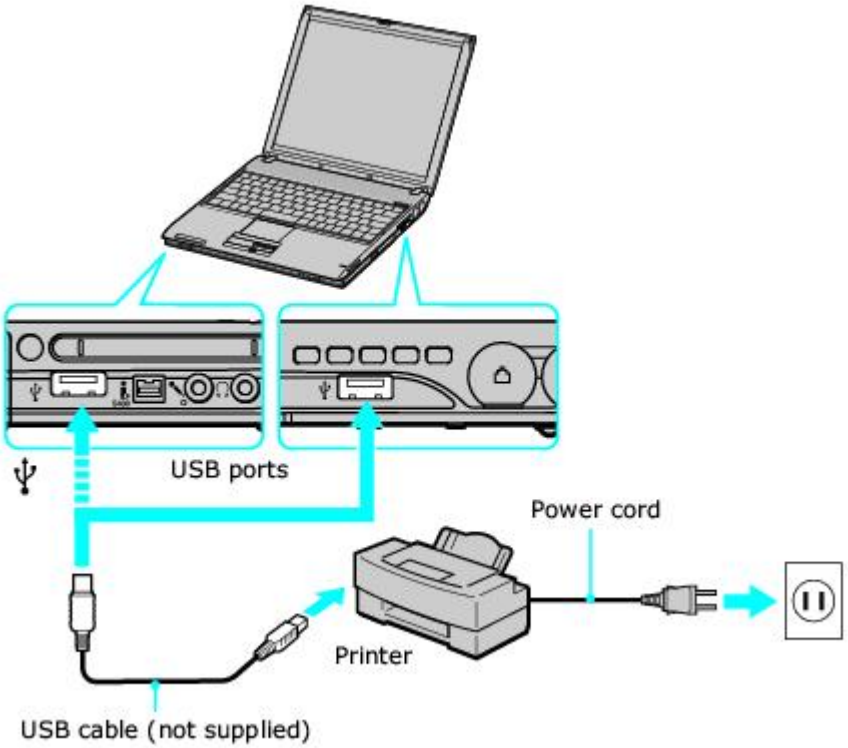
Connecting a printer

You can easily connect a printer to your computer or port replicator (if applicable). The Found New Hardware Wizard enables you to easily install the printer software, but some printers require separate driver software installation. See the instructions that accompanied your printer for more information.

To connect a USB printer

1. Plug the USB cable into the USB port on your computer. See Locating Ports and Jacks.
2. Plug the other end of the USB cable into the USB port on the printer. The **Found New Hardware Wizard** appears.

Connecting a USB Printer

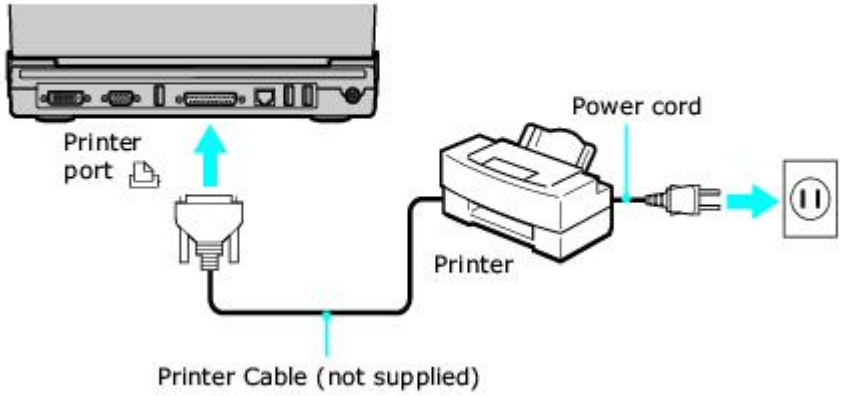


See the guide that accompanied the printer for more information on its installation and use.

To connect a printer (port replicators only)

1. Plug the printer cable into the Printer port on your port replicator. See Locating Ports and Jacks.
2. Plug the other end of the printer cable into the port on the printer.

Connecting a Printer



3. Restart your computer by clicking **Start**, **Turn Off Computer**, and **Restart**. If the **New Hardware Wizard** appears, follow the on-screen instructions.

4. Make sure the computer recognizes the printer. Follow these steps:

   - Click **Start**, **Control Panel**, **Printers and Other Hardware**, and then **Printers and Faxes**.
     If the computer recognizes the printer, it will be listed in the **Printers and Other Hardware** window.
     If the computer does not recognize the printer, you may need to install the printer driver software. See the guide that accompanied the printer for more information.

✍ See the guide that accompanied the printer for more information on its installation and use.

Disconnecting a printer

You can disconnect the printer cable when the computer is on or off. Disconnecting a printer when the computer is in a power saving mode (Standby or Hibernate) may cause the computer to malfunction.

To disconnect a printer

- Unplug the printer cable from the computer.

Frequently asked questions

Why can't I print a document?

- Make sure the printer is on, and the printer cable is securely connected to the ports on your printer and computer. See Connecting a printer for more information.
- Make sure the printer is compatible with the Microsoft® Windows® operating system installed on your computer.
- You may need to install the printer driver software before you use the printer. See the guide that accompanied the printer for more information.
- If the printer is not functioning after the computer resumes from a power saving mode (Standby or Hibernate), then restart the computer.
- If the bidirectional communication functions are provided with your printer, disabling the functions on your computer may enable printing. Follow these steps:

    1. Click **Start**, and then **Settings**.
    2. Click **Printers**.
    3. Right-click an unused printer and select **Properties**.
    4. Click the **Ports** tab.
    5. Click to cancel the **Enable bidirectional support** check box.
    6. Click **OK**.

This change to the settings disables the bidirectional communication functions of your printer, such as data transfer, status monitoring, and remote panel.

- Using the Touch Pad
- Using Memory Stick Media
- Changing the Window Design of Sony Programs

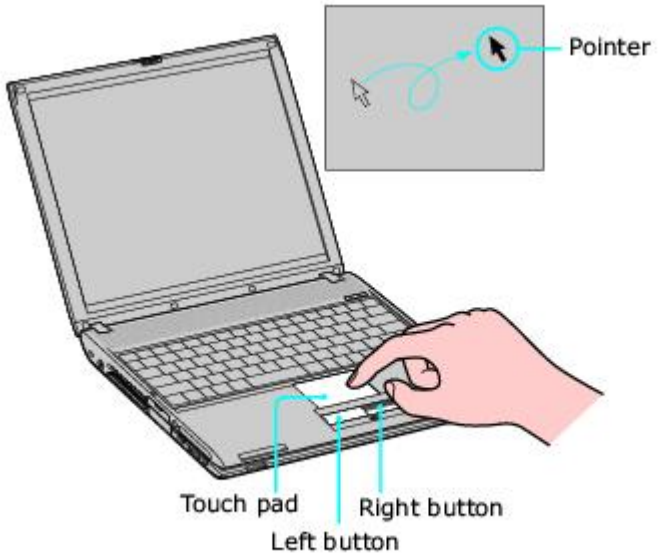
Using the Touch Pad

A pointing device called a touch pad is located in front of the keyboard. You can point to, select, drag, and scroll objects on the screen using the built-in touch pad.

- Describing the touch pad
- Customizing the touch pad
- Frequently asked questions

Describing the touch pad

Locating the Touch Pad



Touch Pad Action	Description
Sliding one finger	Equivalent to using a mouse to place the pointer on an item.
Tapping once	Equivalent to pressing the left button once.
Tapping twice	Equivalent to pressing the left button twice.
Sliding one finger while pressing the left button	Equivalent to using the mouse to drag an item.
Moving your finger along the right edge of the touch pad	Equivalent to scrolling vertically. (The scroll function is available only with programs that support a touch pad scroll feature.)
Moving your finger along the bottom to scroll horizontally	Equivalent to scrolling horizontally. (The scroll function is available only with programs that support a touch pad scroll feature.)

Customizing the touch pad

Sony Notebook Setup lets you customize, enable, or disable the touch pad. Open the Mouse Properties dialog box to set your touch pad and mouse preferences, such as changing pointers, enabling or disabling the tapping feature, clicking both buttons simultaneously, and adjusting the touch pad speed.

To customize the touch pad and mouse

- Right-click the **Touchpad** icon on the Windows® taskbar, and click **Mouse Properties** from the shortcut menu. The **Mouse Properties** dialog box appears.

To enable the touch pad

1. Press the **Windows** key . The **Start** menu appears.
2. Press **P** to select **Programs**.
3. Press **S** until **Sony Notebook Setup** is selected, and press **Enter**. A submenu appears.
4. Press the **Down Arrow** key to select **Sony Notebook Setup**.
5. Press **Enter**. The **Sony Notebook Setup** dialog box appears.
6. Press the **Right Arrow** key to select the **Device** tab.
7. Press the **Tab** key to select the **Default** button, and press **Enter**. A pop-up window appears.
8. Press the **Left Arrow** key to select **OK**, and press **Enter**. The **Enable Touchpad** option is automatically selected.
9. Press the **Tab** key to select the **Apply** button, and press **Enter**.
10. Click **OK**.

To disable the touch pad

1. Click **Start** on the Windows® taskbar, and point to **Programs**.
2. Point to **Sony Notebook Setup**, and click **Sony Notebook Setup** in the submenu. The **Sony Notebook Setup** dialog box appears.
3. Click the **Device** tab.
4. In the left panel, click to cancel the **Pointing Device** check box.
5. Click **Apply**.

Frequently asked questions

What do I do if the touch pad does not work?

- Try restarting your computer. Follow these steps:
  1. Press the **Windows** key .
  2. Press **U**. The **Shut Down Window** dialog box appears.
  3. Press **R** to select restart.
  4. Press **Enter**.
- If the computer does not restart,
  1. Press the **Ctrl**+**Alt**+**Delete** keys simultaneously. The **Windows Security** window appears.
  2. Press the **Right Arrow** key to select **Shut Down**.
  3. Press **Enter**.
  4. Press **R** to select restart.
  5. Press **Enter**.
- If you still cannot restart your computer, slide and hold the power switch to turn off the computer.
- If the pointer does not move while playing a disc, press the **Ctrl**+**Alt**+**Delete** keys simultaneously to stop playback and restart the computer.
- If you are still experiencing problems, make sure another mouse is not installed.
- You may have disabled the touch pad without connecting a mouse to the computer. See To enable the touch pad.

What do I do if my computer is interpreting a single-click as a double-click?

1. Right-click the **Touchpad** icon on the Windows® taskbar, and click **Pointing Device Properties** from the shortcut menu. The **Mouse Properties** dialog box appears.
2. On the **Buttons** tab, click to select the **Single-click to open an item (point to select)** check box.
3. Click **Apply** to install your settings.
4. Click **OK** to close the window.

Using Memory Stick Media

This compact, portable, and versatile recording medium has a data capacity exceeding that of a floppy disk. The medium is specially designed for exchanging and sharing digital data with compatible products. Because it is removable, the media can be used for external data storage.

- About Memory Stick media
- Inserting Memory Stick media
- Viewing the contents
- Write-protecting Memory Stick media
- Formatting Memory Stick media
- Removing Memory Stick media
- Frequently asked questions

About Memory Stick media

Memory Stick® media are a compact, portable, and versatile data storage media designed for exchanging and sharing digital data with compatible devices. You can store different data formats on a single Memory Stick media. The following types of Memory Stick media are available, but compatibility with your computer can vary.

- MagicGate Memory Stick media (MG Memory Stick media) — Provides copyright protection with authentication and encryption, using Sony® MagicGate technology. Authentication ensures that protected content is only transferred between compliant devices and media. Protected content can be recorded and transferred in an encrypted format to prevent unauthorized duplication or playback.

- Memory Stick PRO media — Provides MagicGate copyright protection and high-speed transfer features when used with compatible Memory Stick PRO devices. VAIO® computers support Memory Stick PRO media for data storage purposes only. Currently, high-speed data transfer and the MagicGate technology features, such as authentication and encryption, are not available.

- Memory Stick media — Provides data storage only. The Memory Stick media does not provide MagicGate technology or high-speed data transfer.

Currently, Sony® SonicStage and OpenMG software are not compatible with the new Memory Stick PRO media. Sony suggests using only MG Memory Stick media to store and transfer any data created with SonicStage or OpenMG software.

Visit the Sony Computing Support Web site at http://www.sony.com/pcsupport regularly for the latest information on the new Memory Stick PRO media.

✍ Memory Stick media do not support video file playback directly from the media. Copy the video file to your hard disk drive and then play back the file.

Inserting Memory Stick media

Before using Memory Stick media, back up important data. The media slot accommodates only one Memory Stick media at a time.

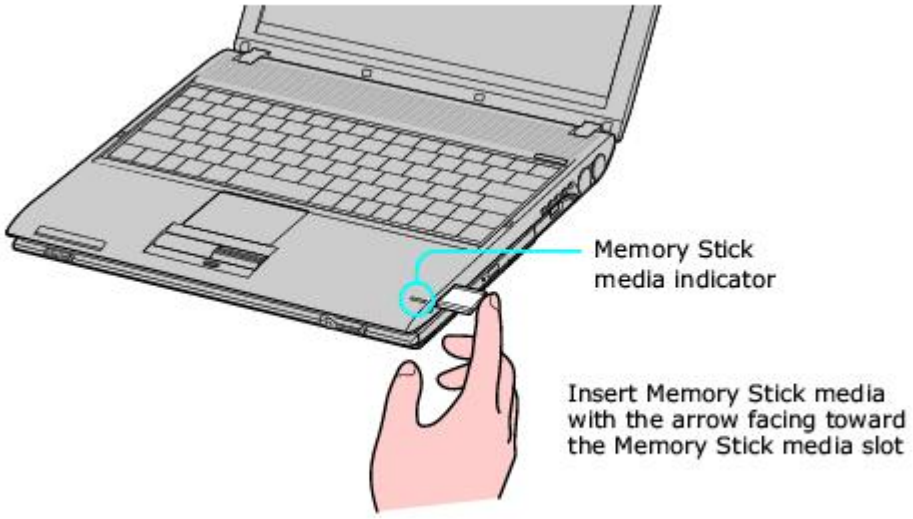
To insert Memory Stick media

1. Insert the Memory Stick media with the arrow facing up and toward the Memory Stick media slot.

   Inserting the media in the wrong direction may damage the connector pins.

2. Carefully slide the Memory Stick media into the slot until it clicks in place. The Memory Stick media indicator briefly blinks.

Inserting Memory Stick Media



Viewing the contents

Depending on the model you purchased, the Sony Memory Stick window appears automatically when you insert a Memory Stick media. From this window, you can choose to view, print, copy or organize your Memory Stick images or data. If the Sony Memory Stick window does not appear when you insert your Memory Stick media, then follow these steps:

To view the contents

1. Click the **My Computer** icon on the desktop. The **My Computer** window appears.

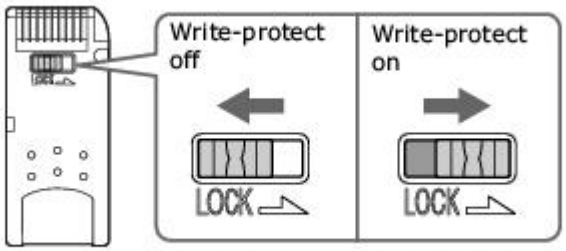
2. Click **Removable Disk**. The **Removable Disk** window appears, displaying the contents stored on the Memory Stick media.

Write-protecting Memory Stick media

Memory Stick® media is designed with a write-protect tab to protect data from accidental erasure or overwriting. Move the tab to the right or left to set or release write-protection. When the write-protect tab of the Memory Stick media is set to LOCK, data cannot be recorded or erased.

Write-protect off	Data can be saved on the Memory Stick media.
Write-protect on	Data can be read from but not saved on the Memory Stick media.

Using the Write-Protect Tab



(Back of Memory Stick Media)

Formatting Memory Stick media

Memory Stick® media is formatted for immediate use when you purchase it. If you need to reformat Memory Stick media, use the Memory Stick Formatter that is provided with the media. For more information about using Memory Stick Formatter, refer to Formatter Help.

Formatting Memory Stick media erases all data, including music data, previously saved to it. Before you reformat Memory Stick media, confirm that the media does not contain files you want to keep. Back up important data before formatting the media.

To format Memory Stick media

1. Insert the Memory Stick media into the Memory Stick media slot. See To insert Memory Stick media for more information.
2. Click the **My Computer** icon on the desktop. The **My Computer** window appears.
3. Right-click **Removable Disk**, and select **Format** from the shortcut menu. The **Format** dialog box appears.
4. Click to select **Quick Format** in the **Format options** box, and then click **Start**.

Removing Memory Stick media

If the media is removed prematurely, a blue screen with an error message appears prompting you to continue or exit. Reinsert the media into the slot and press **Enter** to continue. This enables the media to finish reading or writing data.

To remove Memory Stick media

1. Wait a minimum of 10 seconds after the Memory Stick media finishes reading or writing data before removing the media.
2. Make sure the access light is off.
3. Push the Memory Stick media in toward the computer.
4. When the Memory Stick media ejects, pull it out.

Be careful when removing the Memory Stick media, as it may eject completely from the slot.

Frequently asked questions

Why can't I open my image files?

You may need to reformat your Memory Stick media.

Formatting Memory Stick media erases all data, including music data, previously saved to it. Before you reformat Memory Stick media, back up important data and confirm that the media does not contain files you want to keep.

1. Copy the data from the Memory Stick media onto your computer's hard disk to save data or images.
2. Format the Memory Stick media using Memory Stick Formatter software preinstalled on your computer. For instructions about formatting a Memory Stick media, see Formatting Memory Stick media.

Why can't I save music files onto my Memory Stick media?

- Only MagicGate Memory Stick media can be used with copyright protected data, such as music.
- Copyright protected music cannot be checked out to any Memory Stick media other than MG Memory Stick media.
- Using recorded music requires permission of the copyright holders.
- Sony is not responsible for music files that cannot be recorded from a CD or downloaded from other sources.

Can I copy images from a digital video camera using Memory Stick media?

Yes, and you can view video clips that you have recorded with Memory Stick media-compatible video camera recorders.

How do I prevent damage to the Memory Stick media?

- Do not use the media in locations that are subject to static electricity or electrical noise.
- Do not touch the media connector with your finger or metallic objects.
- Do not attach labels other than the supplied label to a media.
- Do not bend, drop, or apply strong shock to the media.
- Do not disassemble or modify the media.
- Do not allow the media to get wet.

How do I extend the life of the Memory Stick media?

- Use the supplied storage case. See the instructions that came with your media for more information on its use.
- Do not use or store the media in a location that is subject to:
  - Extremely high temperatures, such as in a car parked in the sun
  - Direct sunlight
  - High humidity or places with corrosive substances

Changing the Window Design of Sony Programs

This feature changes the appearance, such as color, of certain Sony programs.

To change the window design

1. Click **Start**, and point to **Settings**, **Control Panel**, and click **UI Design Selector**.
2. Click **<<** or **>>** to view the designs.
3. Click **Apply** to select a design that appears in the center window. The **UI Design Selector** window design changes. The window design for your Sony software will match the **UI Design Selector** window.
4. Click **OK**.

Mice and Keyboards

- Using the Keyboard
- Connecting External Mice and Keyboards

Using the Keyboard

Your keyboard is very similar to a typewriter's, but your computer keyboard has additional keys that perform specific computer-related tasks.

- Key descriptions
- Combinations and functions with the Windows key
- Indicator Lights
- Combinations and functions with the Fn key

Key descriptions

Key	Description
Numeric keypad	Contains the keys found on a typical calculator. Use the numeric keypad area to type numbers or to perform mathematical calculations, such as addition and subtraction. Numbers appear on the front beveled edge of the numeric keys. Press the Num Lock key to activate the numeric keypad. (When you do so, the Num Lock indicator light turns on.) Press the Num Lock key again to deactivate the numeric keypad.
Arrow keys	The Left, Right, Up, and Down arrow keys move the pointer on the screen. They also function as the Home, End, Page Up, and Page Down keys, respectively, when the Fn key is pressed.
Correction keys	The Insert, Back Space, and Delete keys enable you to make corrections to keystrokes.
Function keys	The 12 function keys along the top of the keyboard are used to perform designated tasks. For example, in many programs, F1 is the Help key. The task associated with each function key may vary from one program to the next.
Escape key	The Esc (Escape) key is used to cancel commands.
Print Screen key	The Print Screen key takes an electronic snapshot of the screen and moves it to the Clipboard. You can then paste the screen shot into a document and print it.
Operator keys (Ctrl, Alt, Shift keys)	Several keys are always used with at least one other key: Ctrl, Alt, and Shift. When held down with another key, the Ctrl (Control) and Alt (Alternate) keys offer another way to give commands. For example, in many programs, instead of choosing the Save command from a menu, you can hold down **Ctrl** and press **S** (referred to as **Ctrl+S**). The Shift key operates the same way as on a typewriter; it is used to produce capital letters or special symbols, such as @ and $.
Windows key	
	The key with the Microsoft® Windows® operating system logo displays the Start menu; it is the equivalent of clicking Start on the taskbar. See Combinations and functions with the Windows key for more information.
Fn key	The Fn key is used in combination with other keys to issue commands. See Combinations and functions with the Fn key for more information.
Applications key	
	The Applications key displays a shortcut menu of context-sensitive choices. Pressing this key is the equivalent of clicking the right mouse button.

Combinations and functions with the Windows key

Combination	Function
+F1	Displays the VAIO Help and Support Center window.
+Tab	Switches the selected button on the taskbar.
+D	Displays the desktop.
+E	Displays the My Computer window.
+F	Displays the Search Results window, where you can find a file or folder. This is the equivalent of selecting Search from the Start menu.
+Ctrl+F	Displays the Search Results - Computers window, where you can locate other computers. This is the equivalent of selecting Search, and then Computer from the Start menu.
+M	Minimizes all displayed windows.
Shift+ +M	Returns all minimized windows to their previous size.
+R	Displays the Run window. This is the equivalent of selecting Run from the Start menu.
Fn+ +Insert	Displays the System Properties window. This is the equivalent of selecting Control Panel, and then System from the Start menu.

Indicator Lights

Indicator	Function
Power	Turns on when the power to the computer is on, blinks in Standby mode, and turns off when the computer is in Hibernate mode or off.
Battery	Turns on when the computer is using battery power, blinks when the battery is running out of power, double-blinks when the battery is charging.
Memory Stick®	Turns on when data is read from or written to the Memory Stick media. (Do not enter Standby mode or turn off the computer when this indicator is on.) When the indicator is off, the Memory Stick media is not being used.
Hard Disk	Turns on when data is read from or written to the hard disk. Do not enter Standby mode or turn off the computer when this indicator is on.
Num Lock	Press this key to activate the numeric keypad. Press it a second time to deactivate the numeric keypad. The numeric keypad is not active when the indicator is off.
Caps Lock	Press this key to type letters in uppercase. Letters appear in lowercase if you press Shift while the indicator is on. Press the key a second time to turn off the indicator. Normal typing resumes when the Caps Lock indicator is off.
Scroll Lock	Press this key to change how you scroll the display. Normal scrolling resumes when the Scroll Lock indicator is off. The Scroll Lock key functions differently depending on the program you are using and does not work with all programs.
Wireless LAN[1]	Turns on when the wireless LAN function is running.

[1] On selected models only.

Combinations and functions with the Fn key

Combinations/

Feature	**Function**
Fn+F3	Toggles the built-in speakers off and on.

Fn+F4 Adjusts the built-in speaker volume. An on-screen display appears notifying you when a change occurs.

To increase volume, press **Fn**+**F4** and then press ↑ or → .

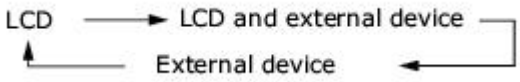
To decrease volume, press **Fn**+**F4** and then press ↓ or ← .

Fn+F5 Adjusts the brightness of the computer screen (LCD).

To increase brightness, press **Fn**+**F5** and then press ↑ or → .

To decrease brightness, press **Fn**+**F5** and then press ↓ or ← .

Fn+F7 Toggles the display between the computer screen (LCD), a connected external device, such as a monitor or projector, and both the LCD and external device.



Select one display at a time when playing a DVD. Connect the cable before you turn on the computer; otherwise, Fn+F7 may not work.

Fn+F12 Puts the system into Hibernate mode, a power management state. To return the system to normal operating mode, press the power button. Hibernate mode consumes the lowest level of power.

Fn+Esc Puts the system into Standby mode, a power management state. To return the system to the active state, press any key or the power button.

Connecting External Mice and Keyboards

Your computer is compatible with many popular mice and keyboards. To function properly, the device you connect must be compatible with the Microsoft® Windows® operating system installed on your computer. For information about your computer's built-in keyboard and key functions, see Key descriptions.

- Connecting a mouse or keyboard
- Disconnecting a mouse or keyboard
- Frequently asked questions

Connecting a mouse or keyboard

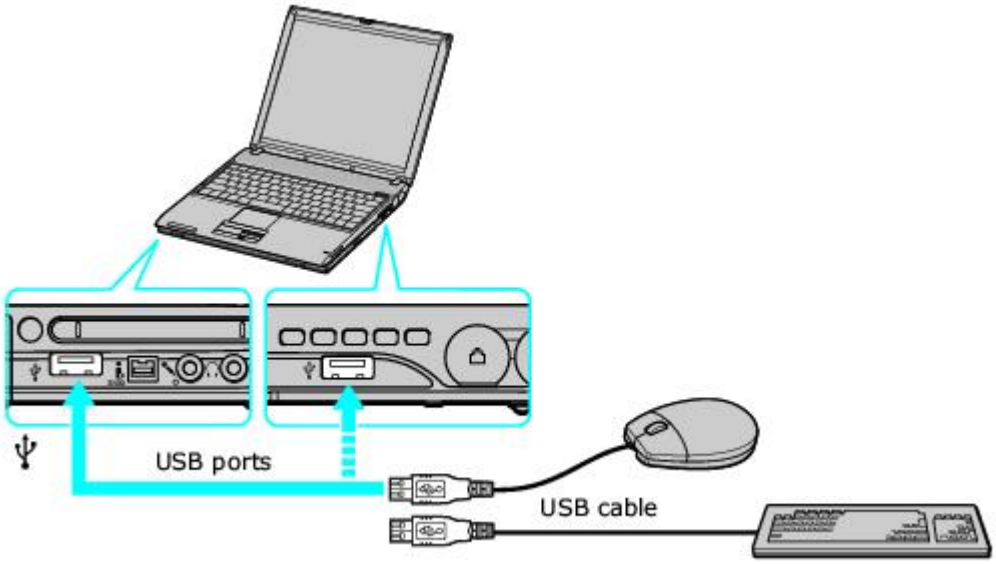
Your computer can be on or off when connecting a universal serial bus (USB) mouse or keyboard. If you connect the mouse or keyboard when the computer is on, you may need to restart the computer for it to recognize the device. See Frequently asked questions for more information.

To connect a USB mouse or keyboard to your computer

1. Plug the USB cable into the USB port . See "Locating Controls and Ports" in the "Setting Up" chapter of your printed VAIO® Computer Quick Start. (One USB port supports one USB connection.)
2. If the **Found New Hardware Wizard** appears, follow the on-screen instructions to complete the installation process.

Although the New Hardware Wizard guides you through the software installation, some devices require separate driver software installation. See the instructions that accompanied your mouse or keyboard for more information

Connecting a USB Mouse or Keyboard



Disconnecting a mouse or keyboard

You can disconnect a USB mouse or keyboard when the computer is on or off. Disconnecting the mouse or keyboard when the computer is in a power saving mode (Standby or Hibernate) may cause the computer to malfunction.

To disconnect a mouse or keyboard when the computer is on or off

- Unplug the USB cable from the USB port.

Frequently asked questions

What do I do if the computer doesn't recognize the mouse?

- Make sure the mouse is securely plugged into the port. See Connecting a mouse or keyboard for more information.
- Restart the computer with the mouse connected to the computer.

What do I do if the pointer doesn't move when I use the mouse?

- Make sure another mouse is not installed.
- If you are playing a disc, press the **Ctrl**+**Alt**+**Delete** keys simultaneously to stop playback and restart the computer.
- If you still cannot use the pointer, restart the computer. You can restart the computer three different ways:
  - Press the **Windows** key , and press **U**. When the **Shut Down Windows** dialog box appears, press **R**, and then press **Enter**.
  - Press the **Ctrl**+**Alt**+**Delete** keys simultaneously. When the **Windows Security** window appears, press the **Right Arrow** key to select **Shut Down**, and press **Enter**. Press **R** and then press **Enter**.
  - Press and hold the power button. When the computer turns off, press the power button again to restart the computer.

Floppy Disks and PC Cards

- Using the Floppy Disk Drive
- Using PC Cards

Using the Floppy Disk Drive

You can connect a floppy disk drive to your computer. The floppy disk drive enables you to read or write data to a floppy disk.

- Inserting and removing floppy disks
- Protecting floppy disks
- Frequently asked questions

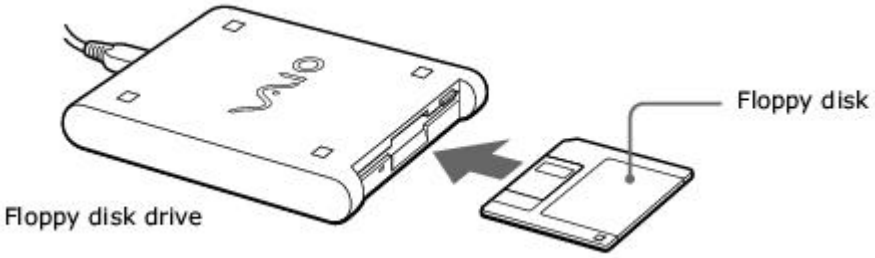
Inserting and removing floppy disks

To write data to a disk, use one that is not write-protected or disable the write-protect feature. The floppy disk drive cannot write data to a disk if it is inserted into the drive improperly.

To insert a floppy disk

1. Hold the floppy disk with the label facing up.
2. Push the floppy disk into the drive until it clicks into place.

Inserting a Floppy Disk



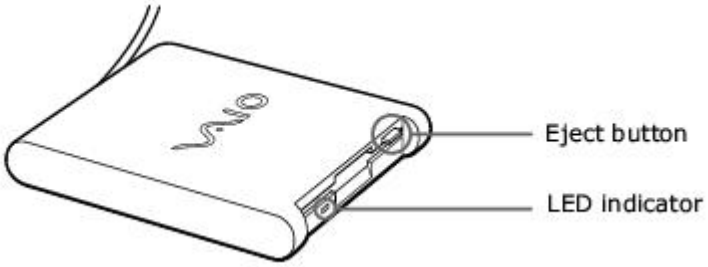
Do not open the shutter manually and touch the surface of the floppy disk.

To remove a floppy disk

1. Close all programs that access the floppy disk.
2. Wait for the LED indicator on the floppy disk drive to turn off.
3. Push the Eject button, and remove the disk.

To avoid losing data, do not push the Eject button when the LED indicator is on.

Removing a Floppy Disk



Protecting floppy disks

- Do not open the shutter manually or touch the surface of the floppy disk.
- Keep floppy disks away from magnets, direct sunlight, and heat sources.

Frequently asked questions

Why is the drive unable to write data to a floppy disk?

Make sure the floppy disk is properly inserted in the drive. See Inserting and removing floppy disks for instructions on how to insert the disk properly.

If the disk is inserted properly and you are still unable to write data to it, the disk may be write-protected. You can either use a floppy disk that is not write-protected or disable the write-protect feature.

Using PC Cards

Your computer includes one or more PC Card slots. A PC Card enables you to connect devices such as an optical drive, floppy disk drive, or Network Interface Card (NIC).

See your VAIO® Computer Specifications for the type of PC Card that is compatible with your computer. These slots are compatible with CardBus. If your computer has more than one PC Card slot, use the lower slot for Type III PC Cards. You do not need to turn off your computer to insert or remove a PC Card.

- Inserting PC Cards
- Removing PC Cards
- Frequently asked questions

Inserting PC Cards

To insert a PC Card

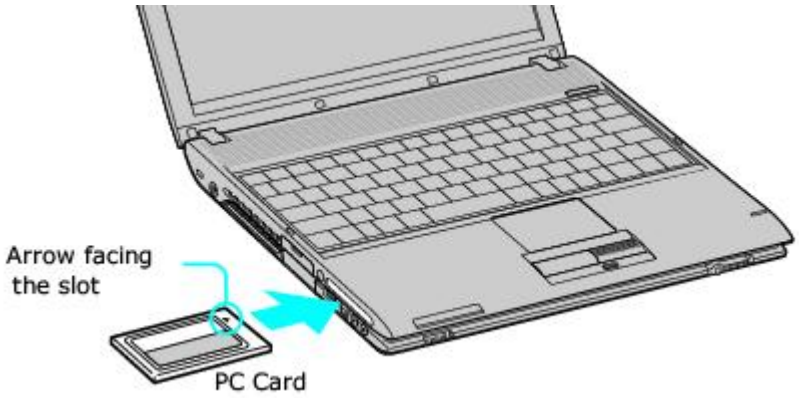
1. Make sure the front label of the PC Card is facing up.
2. Push the PC Card gently into the slot. The system automatically detects the PC Card.
3. If the **Found New Hardware Wizard** appears, follow the on-screen instructions to complete the installation process.

Do not force a PC Card into the slot; this may damage the connector pins.

When a PC Card is inserted, do not place your computer in a bag or case. Pressure or shock to a PC Card may damage your computer.

Touching the head of the PC Card will not damage the connector pins, but damage may occur if the head of the PC Card is sticking out of the PC Card slot while the computer is being transported.

Inserting a PC Card



Removing PC Cards

You can remove PC Cards while the computer is on or off. PC Cards draw power from the computer when they are inserted into the PC Card slot, whether or not you use the card.

If you are not using your PC Card and you are using a battery as a power source, remove the PC Card from the PC Card slot to conserve battery power.

To remove a PC Card while your computer is on

1. Double-click the **Unplug or Eject Hardware** icon on the taskbar. The **Unplug or Eject Hardware** dialog box appears.
2. Click to select the PC Card **in the Hardware devices window, if it is not already selected**.
3. Click **Stop**. The **Stop a Hardware device** window appears.
4. Make sure the PC Card is selected, and click **OK.** A message appears stating it is safe to remove the hardware device.
5. Push the Release button. The Release button pops out.
6. Push the Release button a second time. The PC Card pops out.
7. Gently pull the card out of the slot.

To remove a PC Card while the computer is off

1. Push the Release button once. The Release button pops out.
2. Push the Release button a second time. The PC Card pops out.
3. Gently pull the card out of the slot.

Frequently asked questions

Why doesn't my PC Card work?

- Make sure the PC Card is inserted properly. See Inserting PC Cards for more information.
- Make sure the PC Card is compatible with the Microsoft® Windows® operating system installed on your computer.
- See the instructions that accompanied your PC Card. You may need to install driver software if you are not using a Sony PC Card.

Why doesn't my computer recognize attached devices?

For some PC Cards, if you alternate between normal power operation and the Standby or Hibernate modes while the card is inserted into the PC Card slot, the computer may not recognize the PC Card or the connected device. Restart your computer.

Why can't I insert my PC Card?

- Make sure you are inserting the card correctly. See Inserting PC Cards for more information.
- You may not be able to use some PC Cards or some functions of the PC Card with this computer. Check the guide that accompanied your PC Card for more information on its use.

Why does an exclamation mark (!) appear on the Device Manager tab in the System Properties dialog box?

- The exclamation mark indicates there is a problem with the specified device. Make sure all cable and power connections are secure.
- You may not be using the most recent driver software provided by the PC Card manufacturer. Make sure the necessary drivers are installed. You may need to remove the driver software, and reinstall it.

Port Replicators

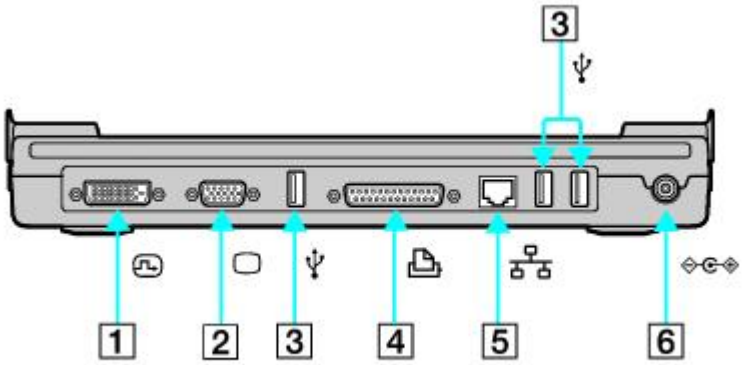
- Locating Ports and Jacks
- Connecting a Port Replicator
- Connecting a Flat-Panel Display
- Disconnecting a Port Replicator

Locating Ports and Jacks

A port replicator is a device that attaches to your notebook and contains additional jacks and ports, such as USB ports. A port replicator may come with your computer, depending on the model you purchased. If you wish to purchase a port replicator, shop Sony online at http://www.sonystyle.com/vaio or contact your local retailer.

The printer port on this port replicator is intended for printer connections only.

Port Replicator (Back Panel)



1 DVI-D port

2 Monitor (VGA) port

3 USB ports

4 Printer port

5 Network (Ethernet) port (10BASE-T/100BASE-TX)

6 DC IN port

Connecting a Port Replicator

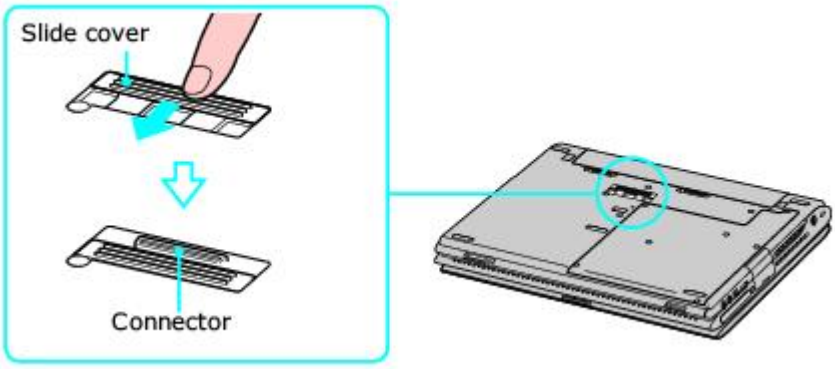
Connect a port replicator to the computer while the computer is off. Use the AC adapter (not the battery) to power the computer while it is connected to a port replicator.

✍ Moving the computer with the port replicator attached could disconnect the AC adapter or power cord, and may cause the computer to lose power or malfunction.

To connect a port replicator

1. Turn off the computer, and disconnect all attached devices.
2. On the bottom of the computer, slide the port replicator cover down until the port replicator connector is completely visible.

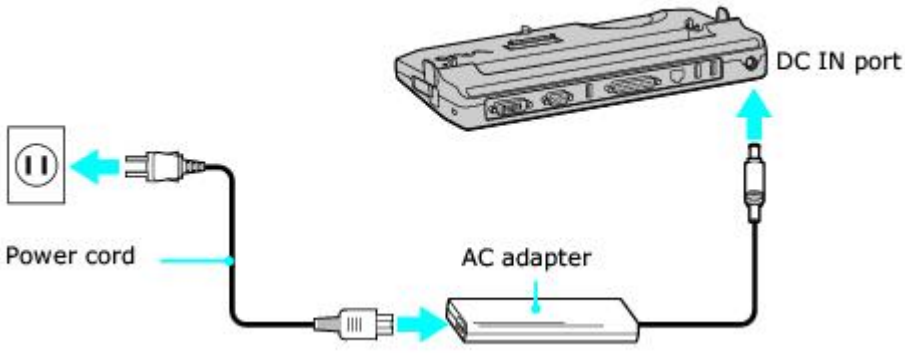
Sliding the Port Replicator Cover



✍ You can charge the battery by installing it before you connect the port replicator. The battery automatically charges once you connect the AC adapter.

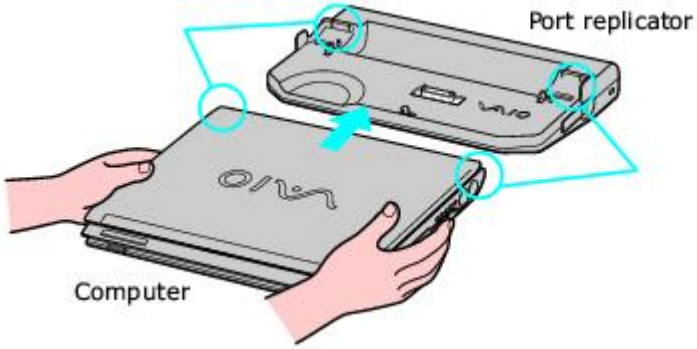
3. Plug the AC adapter into the **DC IN** port on the port replicator, and plug the power cord into the AC adapter and an AC outlet. The power indicator turns on.

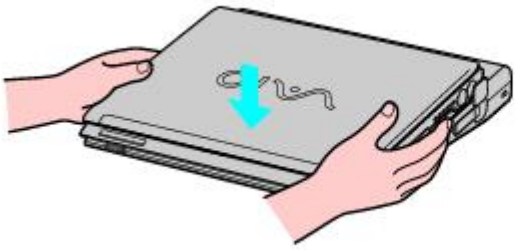
Connecting an AC Adapter to a Port Replicator



4. Align the connector on the bottom of the computer with the port replicator connector, and gently push the computer down until it clicks into place.

Connecting a Port Replicator





5. Make sure the port replicator is securely fastened to the computer.
6. Turn on the computer.

Connecting a Flat-Panel Display

The port replicator includes a Digital Visual Interface-Digital (DVI-D) port, which enables you to connect your computer to a flat-panel display. To connect to a flat panel display, you must use a DVI-D or DVI-D/I display cable. If you wish to purchase a cable, contact your local retailer.

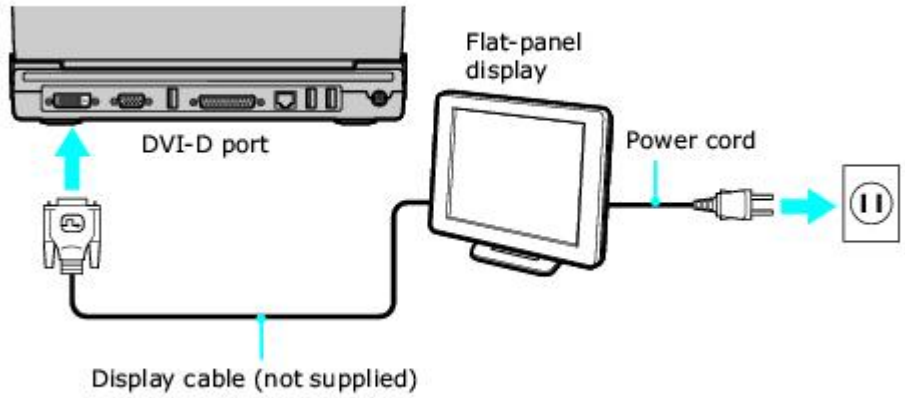
Your port replicator also includes a Monitor (VGA) port. For Monitor port connections, see Using Computer Monitors and Projectors for more information.

To connect the computer to a flat-panel display

1. Connect the computer to the port replicator. See Connecting a Port Replicator for more information.
2. Plug the display cable into the DVI-D port on the port replicator. Make sure the other end is firmly connected to the flat-panel display.
3. Plug the flat-panel display power cord into an AC outlet.
4. Turn on the computer and flat-panel display.
5. Press the **Fn**+**F7** keys to toggle the display between your computer, the flat-panel display, or both the computer and flat-panel display. See Selecting a display for more information.

You cannot use the Monitor (VGA) port on your computer when a port replicator is connected to the computer. Use the DVI-D or Monitor (VGA) port on the port replicator instead.

Connecting a Flat-Panel Display



Disconnecting a Port Replicator

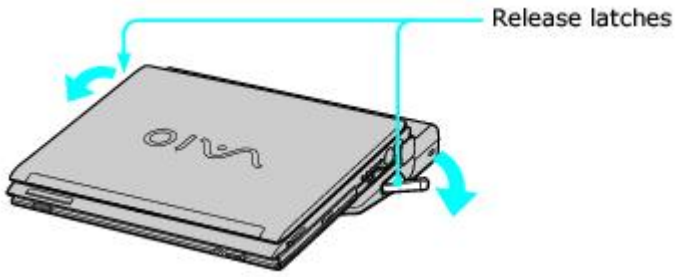
Disconnecting a port replicator when the battery power is low may result in data loss or a computer malfunction. You can disconnect a port replicator when the computer is off or in a power saving mode (Standby or Hibernate).

When the battery is low, turn off the computer before you disconnect a port replicator.

To disconnect a port replicator

1. Close any active programs to prevent data loss.
2. Either turn off the computer or initiate a power saving mode by doing the following:
   - Pressing the **Fn**+**Esc** keys to initiate Standby
   - Pressing the **Fn**+**F12** keys to initiate Hibernate
3. Pull the release latches on each side of the port replicator to release the computer from the port replicator.

Releasing a Computer from a Port Replicator



4. Lift the computer away from the port replicator.

Disconnecting a Port Replicator

Audio and Video Connections

- Using i.LINK Digital-Video Recorders
- Using Computer Monitors and Projectors
- Using Speakers
- Using Microphones

Using i.LINK Digital-Video Recorders

You can connect a digital-video (DV) recorder, such as an i.LINK®[1] digital video camera recorder, to the i.LINK® S400 (IEEE 1394) port on your computer.

- Connecting an i.LINK digital video recorder
- Disconnecting the i.LINK digital video recorder
- Using a digital video camera recorder
- Frequently asked questions

[1] i.LINK is a trademark of Sony used to designate that a product contains an IEEE 1394 connector. The i.LINK connection may vary, depending on the software application, operating system, and compatible i.LINK devices. All products with an i.LINK connection may not communicate with each other. Refer to the documentation that came with your compatible i.LINK device for more information on operating conditions and proper connection. Before connecting compatible i.LINK PC peripherals to your system, such as a CD-RW or hard disk drive, confirm their operating system compatibility and required operating conditions.

Connecting an i.LINK digital video recorder

You can connect an i.LINK digital video (DV) recorder when the computer is on or off. Connecting the DV recorder when the computer is in a power saving mode (Standby or Hibernate) may cause the computer to malfunction.

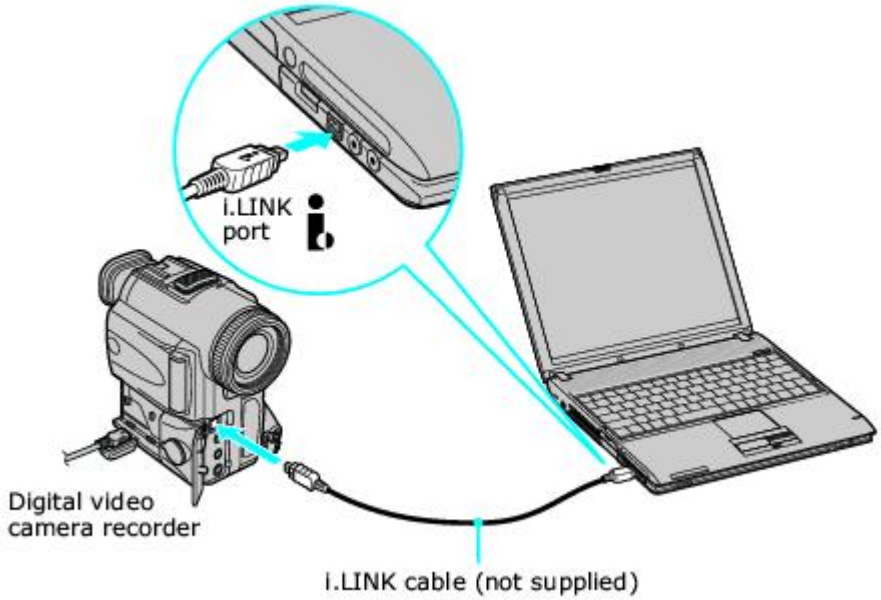
Before you connect an i.LINK digital video recorder

- Do not connect more than one digital video camera recorder at a time. The preinstalled programs on your computer will not recognize multiple cameras.
- Do not connect an external device that requires power from the i.LINK port. The i.LINK port does not supply power to the external device.
- The i.LINK port supports transfer rates of up to 400 Mbps; however, the actual transfer rate is the lowest transfer rate of the external device.
- The i.LINK features available may vary depending on the programs you use. See the help guide that accompanied your program for more information.

To connect an i.LINK digital video recorder

1. Turn on the digital video (DV) device and the computer.
2. Plug the i.LINK® cable into the i.LINK port on the DV device.
3. Plug the other end of the i.LINK cable into the i.LINK port on your computer.

Connecting an i.LINK Digital Video Camera Recorder



See the guide that accompanied your digital video camera recorder for more information on its installation and use.

Disconnecting the i.LINK digital video recorder

You can disconnect the i.LINK digital video recorder when the computer is on or off. Disconnecting the DV device when the computer is in a power saving mode (Standby or Hibernate) may cause the computer to malfunction.

To disconnect the i.LINK DV recorder

1. Turn off the i.LINK DV device.
2. Unplug the i.LINK cable from the i.LINK port on the computer.

Using a digital video camera recorder

Your computer comes with preinstalled driver software that is compatible with most Sony digital video camera recorders. If you purchased a camera that comes with its own driver software, install these drivers before you use the camera.

To view images

You can view images captured by your digital video camera recorder. Follow these steps:

1. Click **Start**, and click **Programs**.
2. Select a program in which to view your images.

Frequently asked questions

Why can't I use the DV recorder?

You may not be able to use the DV recorder, and the message **DV equipment seems to be disconnected or turned off** may appear because the i.LINK[1] cable is not securely plugged into the ports on the computer or camera. Unplug the connectors, and plug them in again. See Connecting an i.LINK digital video recorder for more information.

[1] i.LINK is a trademark of Sony used only to designate that a product contains an IEEE 1394 connection. The i.LINK connection may vary, depending on the software applications, operating system, and compatible i.LINK devices. All products with an i.LINK connection may not communicate with each other. Refer to the documentation that came with your compatible i.LINK device for information on operating conditions and proper connection. Before connecting compatible i.LINK PC peripherals to your system, such as CD-RW or hard disk drive, confirm their operating system compatibility and required operating conditions.

Using Computer Monitors and Projectors

You can connect an external display (such as a computer monitor or a projector) to your computer.

- Connecting a computer monitor
- Connecting a multimedia monitor or projector
- Selecting a display
- Disconnecting a computer monitor or projector

Connecting a computer monitor

Your computer can display images to the computer screen (LCD), to an external computer monitor, or to both the LCD and external monitor while your computer is on.

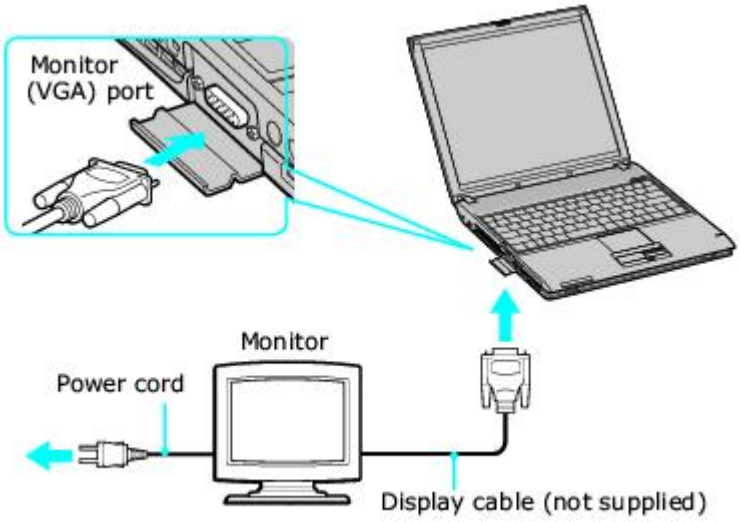
If you purchased a port replicator, you can connect your computer to a flat-panel display. See Connecting a Flat-Panel Display for more information.

To connect a computer monitor

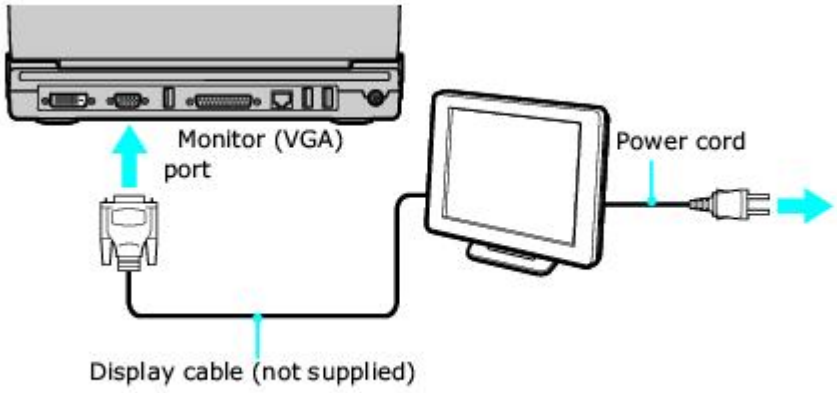
1. Make sure the computer monitor is plugged into an AC outlet.
2. Plug the display cable into the Monitor (VGA) port on the computer.
3. If it is not already on, turn on the computer monitor.
4. Press the **Fn**+**F7** keys to toggle the display between your computer, the monitor, or both the computer and monitor. See Selecting a display for more information.

You cannot use the Monitor (VGA) port on your computer when a port replicator is connected to the computer. Use the Monitor (VGA) port on the port replicator instead.

Connecting a Computer Monitor



Connecting a Computer Monitor to a Port Replicator



Connecting a multimedia monitor or projector

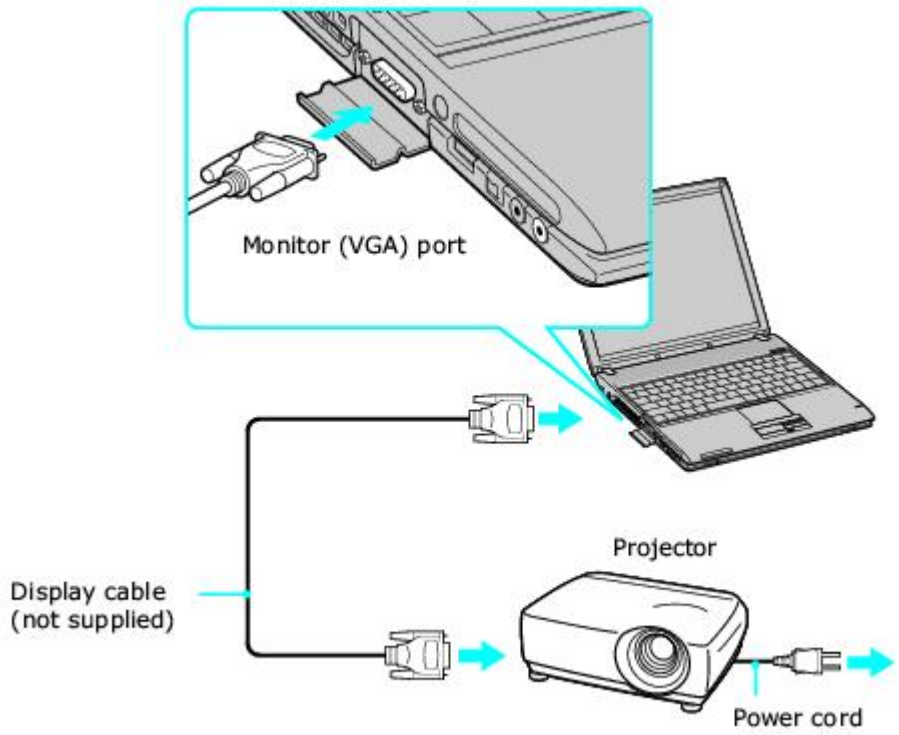
You can connect a multimedia device, such as a multimedia computer monitor or projector, to your computer. Connecting a multimedia monitor enables you to display images on your computer screen (LCD), the multimedia monitor, or both.

To connect a multimedia monitor or projector

1. Plug the device into an AC outlet.
2. Plug the video cable into the Monitor (VGA) port on your computer. If you are using a multimedia computer monitor, which has built-in speakers and a microphone, plug the audio cable into the Headphone jack on your computer to hear sound.

   To locate the Monitor port and Headphone jack, see "Locating Controls and Ports" in the "Setting Up" chapter of your printed VAIO® Computer Quick Start.

Connecting a Projector



3. Turn on the device (if it is not already on), and then turn on your computer.
4. Press the **Fn**+**F7** key combination to toggle the display between your computer, the monitor, or both. See Selecting a display for more information.

See the guide that accompanied your projector for more information on its installation and use.

Selecting a display

You can connect external displays (projector or computer monitor) to your computer while it is on. When you connect an external display to your computer, you can switch the display between the computer screen (LCD), the external display, or both, using shortcut keys or the Display Properties settings.

Shortcut keys Result

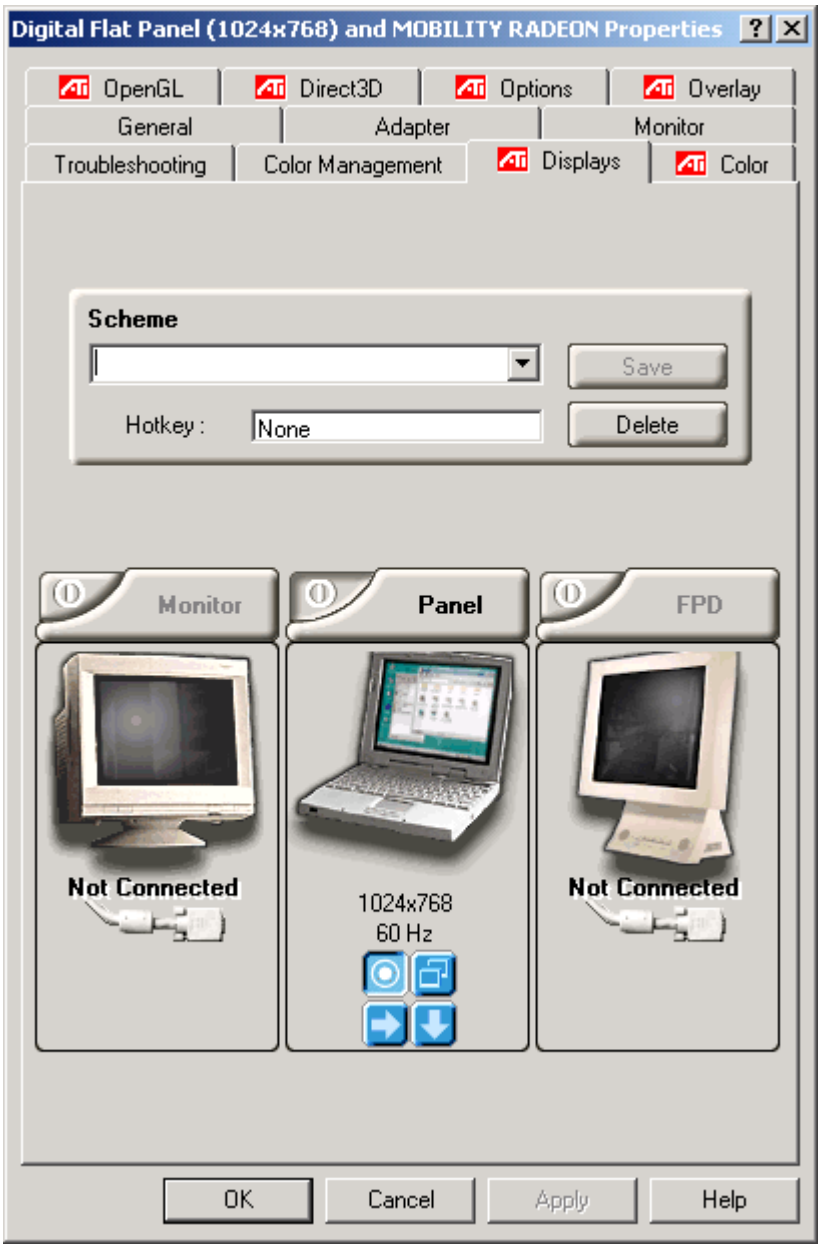
Fn+F7 Toggles the display between the computer screen (LCD), a connected external display, such as a monitor or projector, and both the LCD and external display.

Select one display at a time. Connect the cable before you turn on the computer; otherwise, **Fn**+**F7** may not work.

To switch the display using the Display Properties settings

1. Plug the display (VGA) cable into the Monitor (VGA) port on your computer.
2. Right-click the desktop, and click **Properties** from the shortcut menu. The **Display Properties** dialog box appears.
3. Click the **Settings** tab, and then click **Advanced**. The **Digital Flat Panel and Mobility Radeon Properties** dialog box appears.
4. Click the **Displays** tab.

Digital Flat Panel and Mobility Radeon Properties Dialog Box



5. Click the red button on the upper right corner of each display.

6. Click **Apply**.

7. Click **OK**. For more information, click **Help**.

✍ If you cannot see your movie or DVD on the external display, change the monitor setting by clicking on the Primary icon on the display panel of your choice.

✍ You may not be able to display the computer screen (LCD) and an external display or projector at the same time, depending on the types of computer displays and projectors you are using.

Disconnecting a computer monitor or projector

You can disconnect the external computer monitor or projector by unplugging the monitor (VGA) cable from your computer's port. Disconnecting the external display when the computer is in a power saving mode (Standby or Hibernate) may cause the computer to malfunction.

Using Speakers

Your computer comes with built-in stereo speakers. If you want to enhance the sound quality of your computer, you can purchase and connect external speakers. If you want to purchase speakers, make sure the speakers are designed for computer use. You can shop Sony online at http://www.sonystyle.com/vaio or contact your local retailer.

- Connecting speakers
- Disconnecting speakers
- Adjusting the volume
- Enabling the audio feature
- Frequently asked questions

Connecting speakers

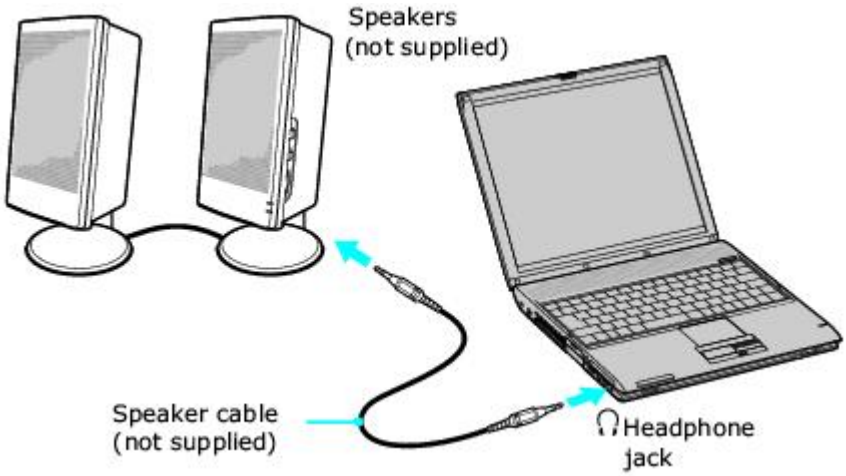
You can connect speakers to your computer to enhance the sound quality of your computer.

Do not place floppy disks on the speakers. The speakers' magnetic field may damage the data stored on the floppy disks.

To connect speakers to your computer

1. Turn down the volume of the speakers.
2. Plug the speaker cable into the Headphone jack on the computer.
3. Plug the other end of the speaker cable into the speaker.

Connecting Speakers



See the guide that accompanied your speakers for more information on its installation and use.

Disconnecting speakers

You can disconnect external speakers when the computer is on or off. Simply unplug the speaker cable from the Headphone jack on the computer.

Adjusting the volume

To adjust the volume for playing CDs and DVDs, use the **Volume** icon on the Taskbar Notification area. Adjusting the volume for playing CDs or DVDs does not adjust the volume for recording sound files.

You can only adjust the recording volume in the **Recording Control** window. See Using a microphone to record sound for instructions on how to open this window.

To adjust the volume of your speakers

1. Right-click the **Volume** icon on the **Taskbar Notification** area, and select **Open Volume Control**. The **Volume Control** window appears.
2. Click and drag the **Volume Control** slider up to increase volume and down to decrease volume.
3. Click to cancel any **Mute** check boxes that are selected.

Sound device	Function
Volume Control	Adjust the sound level from the speakers or headphones.
Wave	Adjust the wavfile sound or the system sound of Windows.
SW Synth	Adjusts the internal or external synthesizer volume.
Microphone	Adjust the internal or external microphone volume.
Telephony	Adjust the modem or telephone volume.
PC Beep	Adjust the beep sound when inserting or removing the PC Card and other devices.

As a shortcut, you can press the **Fn+F4** keys and the Up Arrow ↑ or Right Arrow → keys to change the volume setting. You can also press the **Fn+F3** keys to toggle the mute option on and off.

Enabling the audio feature

If you do not hear sound when playing a CD or DVD, you may need to enable the audio feature.

To enable the audio feature

1. Click **Start**, point to **Settings**, **Control Panel**, and click **System**. The **System Properties** window appears.
2. Select the **Hardware** tab, and click **Device Manager**. The **Device Manager** window, which lists the hardware devices, appears.
3. Double-click **DVD/CD-ROM drives**[1].
4. Double-click the listed drive name, and click the **Properties** tab.
5. If it is not already selected, click the **Enable digital CD audio for this CD-ROM device** check box.

[1] The read/write drive letter designation may vary, depending on your system's hardware configuration.

Frequently asked questions

Why won't my speakers work?

- Make sure the speakers are properly connected and the volume is turned up loud enough to hear sound.
- Your speakers may not be designed for computer use.
- If the speakers have a mute button, set the button to off.
- If the speakers have a volume control, make sure the volume is turned up loud enough to hear sound.
- If you have connected an audio cable to the Headphone jack, disconnect the cable and use the speaker cable that was supplied with the speakers.
- If you are using battery power, make sure the battery is inserted properly and is charged. See Using the Battery for more information.
- If the speakers require external power, make sure the speakers are connected to a power source. See the guide that accompanied the speakers for more information.

Why can't I hear sound from my speakers?

- If the computer is using battery power, make sure the battery is properly inserted and is charged. See Using the Battery for more information.
- If you are using a program that has its own volume control, make sure the volume control is properly set. See that program's help guide for more information.
- Your speakers may be set to mute, the volume setting may be too low, or the audio option may be disabled. See Adjusting the volume and Enabling the audio feature for more information.

Why don't the Fn+F3 or the Fn+F4 key combinations work?

The Fn+F3 keys toggle the built-in speakers on and off. The Fn+F4 keys adjust the built-in speaker volume. The computer may not recognize the Fn+F3 and Fn+F4 keys if the correct speakers are not selected. Follow these steps:

1. Right-click the **Volume** icon on the **Taskbar Notification** area, and select **Adjust Audio Properties**.
2. On the **Audio** tab, click **Advanced** in the **Sound Playback** box. The **Advanced Audio Properties** dialog box appears.
3. On the **Speakers** tab, select the correct speaker setup from the **Speaker setup** drop-down menu.

Why do I hear noise distortion while listening to music with speakers or headphones?

You may experience noise distortion while listening to music with speakers or headphones if the CPU control is set to Automatic Profile Selection. If your computer is using battery power, use the preinstalled PowerPanel program to set the CPU control to Maximum Performance. Follow these steps:

1. Right-click the **CPU** icon on the **Taskbar Notification** area.
2. Point to **Profiles**, and select **Maximum Performance**.

Using Microphones

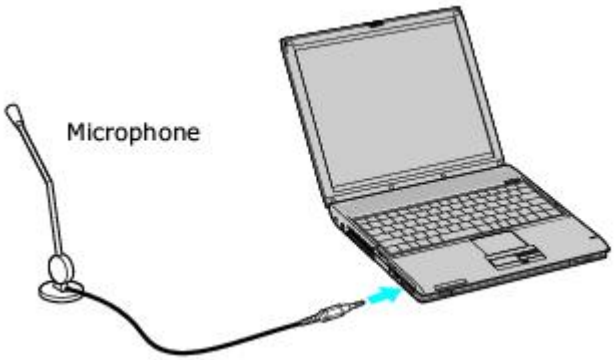
You can connect a microphone to your computer to enable the sound input to your computer. Make sure your microphone is designed for computer use. If you wish to purchase a microphone, shop Sony online at http://www.sonystyle.com/vaio or contact your local retailer.

- Connecting a microphone
- Disconnecting a microphone
- Using a microphone to record sound
- Frequently asked questions

Connecting a microphone

Plug the microphone cable into the Microphone jack[1] on the computer.

Connecting a Microphone



See the guide that accompanied your microphone for more information on its installation and use.

[1] A protruding dot located next to the Microphone jack distinguishes this jack from the Headphone jack.

Disconnecting a microphone

You can disconnect an external microphone when the computer is on or off. Simply unplug the microphone cable from the Microphone jack on the computer.

Using a microphone to record sound

You can record messages, memos, etc. by connecting a microphone to the Microphone jack[1] on your computer.

To record from a microphone

1. Double-click the **Volume** icon on the **Taskbar Notification** area. The **Volume Control** window appears.
2. From the **Options** menu, click **Properties**. The **Properties** dialog box appears.
3. Click to select the **Recording** option in the **Adjust volume for** box, and click **OK**. The **Recording Control** window appears.
4. If it is not already selected, click the **Select** check box at the bottom of the **Microphone** column. Close the **Recording Control** window.
5. Click **Start**, point to **Programs**, **Accessories**, **Entertainment**, and then click **Sound Recorder**. The **Sound - Sound Recorder** window appears.

For help using Sound Recorder, click **Help** in the **Sound Recorder** window.

To adjust the volume for recording sound

You can only adjust the volume for recording in the **Recording Control** window.

1. Right-click the **Volume** icon on the **Taskbar Notification** area, and select **Adjust Audio Properties**.
2. On the **Audio** tab, click **Volume** in the **Sound recording** box. The **Recording Control** window appears.
3. Drag the **Microphone** slider up to increase volume and down to decrease volume.

[1] A protruding dot located next to the Microphone jack distinguishes this jack from the Headphone jack.

Frequently asked questions

Why doesn't my microphone work?

If you are using an external microphone, make sure the microphone is turned on and is properly plugged into the Microphone jack on the computer. See Connecting a microphone for more information.

Memory Upgrades

Before you upgrade your computer's memory, make sure you read the safety information in Precautions and Procedures. For the type of module and amount of memory installed on your computer, refer to the Welcome page to find VAIO® Computer Specifications.

- Precautions and Procedures
- Removing and Installing Memory Modules
- Confirming Added Memory Capacity

Precautions and Procedures

Sony recommends that memory upgrades be performed by an authorized Sony Service Center. To find the nearest center or agent, go to: http://www.sony.com/pcsupport.

The procedures described below assume familiarity with the general terminology associated with personal computers and with the safety practices and regulatory compliance required for using and modifying electronic equipment. When installing a memory module in your computer, make sure you read the proper safety precautions below. Mistakes that occur when installing or removing a memory module may cause a malfunction.

- Turn off the computer. Disconnect the computer from its power source and from any telecommunications links, networks, or modems before you install or remove a memory module. Failure to do so may result in personal injury or equipment damage.
- Introducing any liquids or any foreign substances or objects into the memory slots, or other internal components of the computer, will result in damage to the computer.
- Electrostatic discharge (ESD) can damage disk drives, memory modules, and other components. Perform the procedures described below only at an ESD workstation. If such a station is not available, do not work in a carpeted area, and do not handle materials that produce or hold static electricity (cellophane wrappers, for example). Ground yourself by momentarily touching an unpainted metal object that is grounded, such as a pipe, radiator, or faucet.
- Do not open the memory module package until you are ready to install the module. The package protects the module from ESD.
- Use the special protective package to store a memory module and prevent ESD.
- Only use memory modules that are compatible with your computer. See the VAIO® computer specifications for more information. If you wish to purchase a memory module, shop Sony online at http://www.sonystyle.com/vaio or contact your local retailer

Removing and Installing Memory Modules

Make sure you read the safety information in Precautions and Procedures before you remove or install a memory module. When installing a memory module, do not open the module package until you are ready to install it. The package protects the module from Electrostatic discharge (ESD).

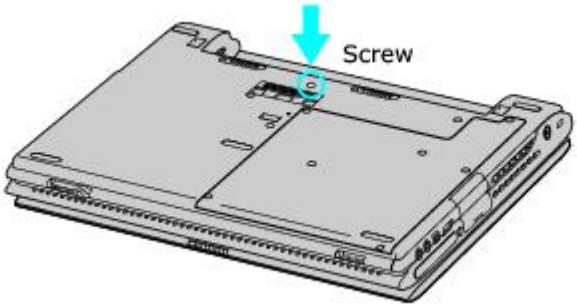
To remove a memory module

1. Turn off the computer and all attached devices.
2. Disconnect the power cord, all cables, and remove the battery if it is installed. See To remove a battery.
3. Wait for the computer to cool down.

   The interior of the computer becomes extremely hot during operation. Wait at least one hour for the computer to cool down before you remove the screws.
4. On the bottom of the computer, use an appropriate screwdriver to loosen and remove the center screw.

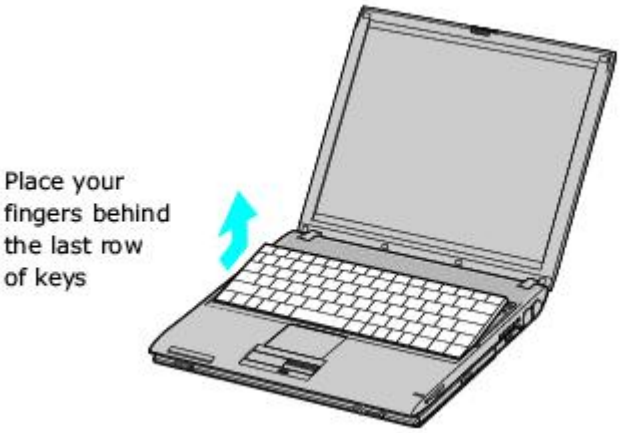
   To avoid damaging the computer, do not remove or loosen any other screws.

Removing the Bottom Screw(s)

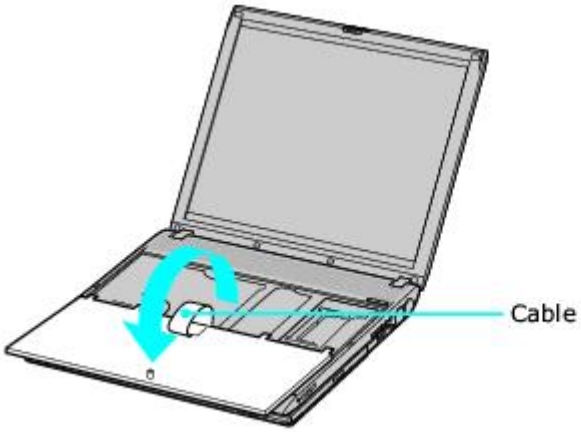


5. Position the computer so you are looking at the keyboard, and place your fingers behind the last row of keys.
6. Gently lift the keyboard up and turn it over the touch pad. Do not detach the cable when lifting the keyboard.

Lifting the Keyboard



Turning the Keyboard



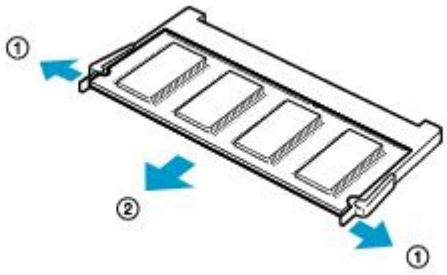
7. Touch a metal object (such as the connector panel on the back of your computer) to discharge static electricity.

Avoid touching any part of the motherboard or other components inside the computer.

8. Remove the memory module by pulling out the tabs (see arrows No. 1).

9. Pull out the module in the direction of arrow No. 2. See To install a memory module for more information.

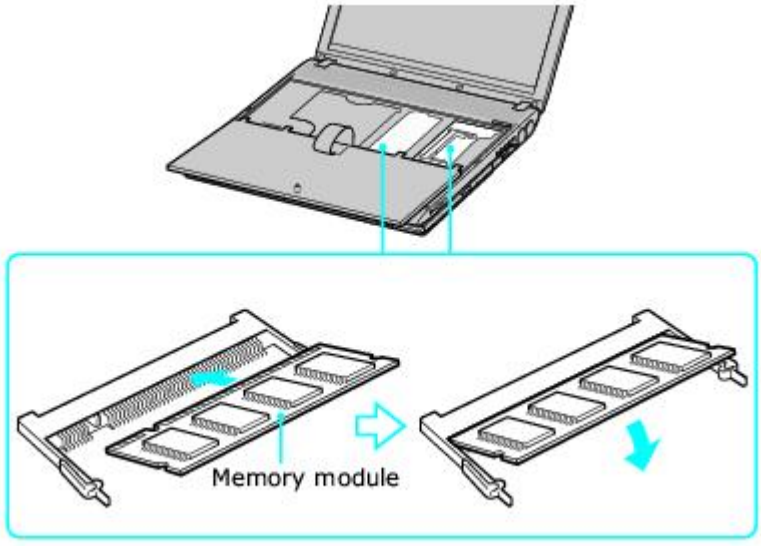
Removing a Memory Module



To install a memory module

1. Remove the new memory module from its packaging, and install the memory module by sliding it into the open slot at a 45-degree angle. See To remove a memory module.

Installing a New Memory Module



2. Push the module down until it snaps into place.

3. When the module is correctly seated, gently flip the keyboard back over the computer, making sure the keyboard is also correctly seated.

4. Replace the fastening screw on the bottom of the computer.

5. Make sure the system recognizes the new memory module. See Confirming Added Memory Capacity for more information.

Confirming Added Memory Capacity

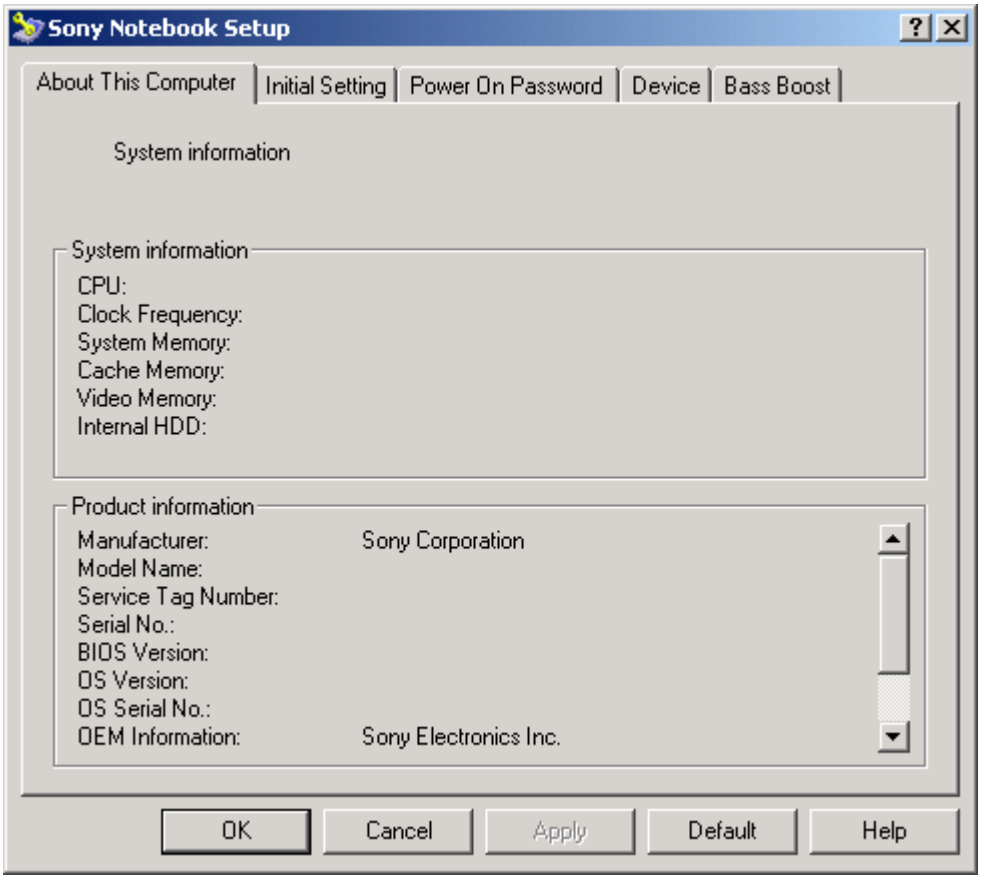
After you've installed a new memory module, make sure the operating system recognizes it.

To check your system's memory

1. Turn on the computer.
2. Click **Start** on the Windows® taskbar, point to **Programs**, and then point to **Sony Notebook Setup**.
3. Select **Sony Notebook Setup** from the submenu. The **Sony Notebook Setup** dialog box appears.
4. On the **About This Computer** tab, make sure the **System Memory** displayed in the **System Information** box matches the amount of memory installed.

The displayed memory may be less than the installed memory due to the amount used by the display adapter.

Sony Notebook Setup



Using the Recovery DVD

The System Recovery DVD enables you to restore the operating system and programs that shipped with your computer if they become corrupted or are erased. This DVD restores your computer to its original factory settings.

About the System Recovery DVD

A System Recovery DVD comes with your computer. The System Recovery DVD enables you to format your hard disk drive and restore the operating system and all original, preinstalled programs. If the operating system or programs become corrupted or are erased, you can restore your computer to the original factory settings.

You may not need to reinstall the entire contents of your hard drive. If you experience a problem with your computer, reinstalling an individual device driver or program may correct the problem. Use the Application Recovery Utility, located on the System Recovery DVD, to reinstall individual programs and device drivers. See Using the Application Recovery Utility for more information.

The System Recovery process removes all programs that you may have installed since you started using your computer. Reinstall any program that was not included with the computer when you purchased it.

Using the System Recovery DVD

The System Recovery DVD contains a backup copy of all the programs originally installed on your hard disk. It can be used only to recover the hard disk of the Sony computer you purchased.

Your computer may include one or more System Recovery DVDs, depending on the model you purchased. If you have more than one DVD, insert the first DVD (No. 1) to begin the recovery process. You may be prompted to insert the next DVD, depending on what you want to restore.

The System Recovery utility does not back up your system's data. If you wish to retain your system data, first perform a backup to an external media.

To use the System Recovery DVD

1. Press the optical drive eject button to extend the disc tray.
2. Place the System Recovery DVD onto the disc tray and gently close it.

   The DVD must be in the drive before you restart your computer.
3. Turn off your computer by clicking **Start**, **Shut Down**, and selecting **Shut Down**.
4. Wait at least 30 seconds, and turn on your computer. The System Recovery utility restarts from the optical drive. Your screen displays the downloading progress.
5. When the **VAIO System Recovery Utility** wizard appears, click **Next**.

   The **Notes on Use** window appears.
6. Click **Next**.

   The **Main Menu - Product Recovery** window appears.
7. Select the appropriate option to recover your system:
   - **Default System Drive Recovery** — All data on Drive C is deleted. The factory default settings and programs are restored on this drive only.
   - **Change Partition Size and Recover** — All partitions, custom installations, and changes are removed from the hard drive. You can set the partition sizes for both Drive C and Drive D. The original, preinstalled operating system and programs are restored.
   - **Factory Default Settings Recovery** — All data and partitions are removed from the hard drive. All original factory settings, the operating system, and preinstalled programs are restored.
8. Follow the on-screen instructions to complete the recovery process.

The recovery process takes approximately 30 to 60 minutes to complete.

After recovering your system using the System Recovery DVD, you may be prompted to insert the DVD after restarting Windows. Use the DVD to restore the individual applications and device drivers.

When you successfully complete your system recovery, you are prompted to complete the Windows® registration process.

Using the Application Recovery Utility

The Application Recovery Utility, located on the System Recovery DVD, enables you to reinstall individual programs and device drivers, and to repair programs.

To use the Application Recovery Utility

1. Make sure the computer is on and the Microsoft® Windows® operating system is running.
2. Place the System Recovery DVD (No.1) onto the drive tray and gently close it.

   The **VAIO Application Recovery Wizard** appears.
3. Click to select the check box next to the name of the application(s) which you want to reinstall.
4. Click **Next**.

   The application reinstalls on the system.
5. When the application recovery is completed, restart your computer by following these steps:
   1. From the **Start** menu, click **Shut Down**.

      The **Shut Down Windows** window appears.
   2. Select **Restart** from the drop-down menu, and then click **OK**.

Support Options

If you have questions about your computer or the preinstalled programs, refer to the following sources for answers in the sequence listed below.

Sony Support Information

1 VAIO® Computer Documentation

The on-screen VAIO® Computer User Guide and the printed VAIO® Computer Quick Start provide information on how to maximize your computer capabilities and solve common problems.

2 Program Guides and Help Files

The preinstalled programs on your computer may come with individual help guides. These guides are stored on the hard disk as on-screen Help files. You can find the Help files from the Help menu under the specific program. For information about Sony programs, click Start and select Welcome to VAIO Life.

3 Operating System Online Support

Your computer comes preinstalled with a Microsoft® Windows® operating system. For operating system support, you can visit Microsoft® customer support at: http://support.microsoft.com/directory/.

4 Sony Computing Support

This service provides instant access to information on commonly encountered problems. Type a description of the problem and the Knowledge Database searches for the corresponding solutions online. You can visit Sony Computing Support at: http://www.sony.com/pcsupport.

Program Support Information

Depending on the configuration you purchased, your computer may not include all of these software programs listed below.

Adobe® Reader®
Adobe Systems Inc.

Support:

web site http://www.adobe.com

telephone 800-685-3652

hours M - F, 6 AM - 5 PM PST

Adobe® Photoshop® Elements
Adobe Systems Inc.

Support: See Adobe® Reader®

Adobe® Premiere® LE
Adobe Systems Inc.

Support: See Adobe® Reader®

Adobe® Premiere®
Adobe Systems Inc.

Support: See Adobe® Reader®

America Online® (Broadband or Dial-Up)
America Online, Inc.

Support:

web site http://www.aol.com

AT&T WorldNet® Service
AT&T Corp.

Support:

web site http://help.att.net

Boingo Wireless
Boingo Wireless, Inc.

Support:

web site http://www.boingo.com/servicecenter.html

telephone 800-880-4117

e-mail support@boingo.com

hours M - F, 4 AM - 10 PM PST
Sat-Sun, 6 AM - 3 PM PST

Click to DVD
Sony Electronics Inc.

Support: Sony Electronics, see VAIO® Support Agent

CLIÉ Converter
Sony Electronics Inc.

Support: Sony Electronics, see VAIO Support Agent

Corel® WordPerfect®
Corel Corp.

Support:

web site	http://www.corel.com
telephone	613-274-0500

CyberLink PowerDVD®
CyberLink Corp.

Support:

web site	http://www.gocyberlink.com/english/cs/support/index_tech.jsp

Drag'n Drop CD
DigiOn, Inc., and Easy Systems Japan Ltd.

Support:

web site	http://www.ddcd.jp/dd3e/sony/cd

Drag'n Drop CD+DVD
DigiOn, Inc., and Easy Systems Japan Ltd.

Support:

web site	http://www.ddcd.jp/dd3e/sony/cd

DVgate
Sony Electronics Inc.

Support: Sony Electronics, see VAIO Support Agent

DVgate Plus
Sony Electronics Inc.

Support: Sony Electronics, see VAIO Support Agent

EarthLink TotalAccess® (DSL or Dial-Up)
EarthLink, Inc.

Support:

web site	http://support.earthlink.net

EverQuest®
Sony Online Entertainment Inc.

Support:

web site	http://www.everquest.com
telephone	858-537-0898

e-mail eqtech@soe.sony.com

hours M - F, 9 AM - 6 PM PST

Giga Pocket® Personal Video Recorder
Sony Electronics Inc.

Support: Sony Electronics, see VAIO Support Agent

ImageStation®
Sony Electronics, Inc.

Support: Sony Electronics, see VAIO Support Agent

Microsoft® Age of Empires® II
Microsoft Corp.

Support: See Microsoft® Works

Microsoft® Encarta® Online
Microsoft Corp.

Support: See Microsoft® Works

Microsoft® Family Game Pack
Microsoft Corp.

Support: See Microsoft® Works

Microsoft® Internet Explorer
Microsoft Corp.

Support: See Microsoft® Works

Microsoft® MSN®
Microsoft Corp.

Support: See Microsoft® Works

Microsoft® Money Standard
Microsoft Corp.

Support: See Microsoft® Works

Windows® Movie Maker 2
Microsoft Corp.

Support: See Microsoft® Works

Microsoft® Office XP Professional
Microsoft Corp.

Support: Sony Electronics, see VAIO Support Agent

Microsoft® Office XP Small Business Edition
Microsoft Corp.

Support: Sony Electronics, see VAIO Support Agent

Microsoft® Simulation Game Pack
Microsoft Corp.

Support: See Microsoft® Works

Microsoft® Windows Media® Player
Microsoft Corp.

Support: See Microsoft® Works

Microsoft® Works
Microsoft Corp.

Support:

web site http://www.support.microsoft.com

MoodLogic
MoodLogic, Inc.

Support:

web site http://www.moodlogic.com/support

e-mail help@moodlogic.com

Network Smart Capture
Sony Electronics Inc.

Support: Sony Electronics, see VAIO Support Agent

Norton Internet Security
Symantec Corporation

Support:

web site http://www.symantec.com/techsupp

PC-cillin®
Trend Micro, Inc.

Support:

web site http://www.trendmicro.com/en/support

telephone 800-864-6027

e-mail pc-cillin@support.trendmicro.com

hours M - F, 5 AM - 5 PM (PST)

PictureGear Studio
Sony Electronics Inc.

Support: Sony Electronics, see VAIO Support Agent

PowerDVD
CyberLink Corp.

Support:

web site http://www.gocyberlink.com/english/cs/support/index.jsp

Quicken® New User Edition
Intuit Inc.

Support:

web site http://www.intuit.com/support

QuickTime®

Apple Computer, Inc.

Support:

web site	http://www.info.apple.com
telephone	800-275-2273

RealOne Player
RealNetworks, Inc.

Support:

web site(s)	http://service.real.com/rjoptions.html
telephone	206-674-2680

RecordNow
Easy Systems Japan LTD

Support:

web site	http://www.easy.co.jp/jrn45/sony

SonicStage
Sony Electronics Inc.

Support: Sony Electronics, see VAIO Support Agent

SonicStage Mastering Studio
Sony Electronics Inc.

Support: Sony Electronics, see VAIO Support Agent

Sony on Yahoo!
Yahoo! Inc.

Support:

web site	http://help.yahoo.com

Screenblast® ACID®
Sony Pictures Digital Entertainment

Support:

web site	http://www.sonicfoundry.com/support/default.asp

Screenblast® ACID® Deluxe
Sonic Foundry, Inc. and Sony Pictures Digital Entertainment

Support:

web site	http://www.sonicfoundry.com/support/default.asp

Screenblast® Sound Forge®
Sonic Foundry, Inc. and Sony Pictures Digital Entertainment

Support:

web site	http://www.sonicfoundry.com

Sony Electronics Inc.

Support: Sony Electronics, see VAIO Support Agent

Sound Blaster® Audigy
Creative Labs, Inc.

Support

web site	http://www.americas.creative.com/support/custsup.asp

Station.com
Sony Online Entertainment Inc.

Support: Sony Electronics, see VAIO Support Agent

TurboTax® for the Web
Intuit, Inc.

Support:

web site	http://www.intuit.com/support
telephone	900-555-4932; 800-644-3193[1]
hours	M - F, 5 AM - 5 PM PST

[1] Support from 900-555-4932 is fee-based. Support from 800-644-3193 is automated and free of charge.

VAIO Action Setup
Sony Electronics Inc.

Support: Sony Electronics, see VAIO Support Agent

VAIO Edit Components
Sony Electronics Inc.

Support: Sony Electronics, see VAIO Support Agent

VAIO Hints and Tips
Sony Electronics Inc.

Support: Sony Electronics, see VAIO Support Agent

VAIO Media
Sony Electronics Inc.

Support: Sony Electronics, see VAIO Support Agent

VAIO Music Services
Sony Electronics Inc.

Support: Sony Electronics, see VAIO Support Agent

VAIO Support Agent
Sony Electronics Inc.

Support:

web site	http://www.sony.com/pcsupport
telephone	888-4-SONY-PC (888-476-6972)[1]
hours	7 days a week, 24 hours a day

[1] Support from 1-888-4-SONY-PC is free of charge for 90 days after the original date of purchase.

WinDVD® for VAIO®
InterVideo, Inc.

Support:

web site	http://www.intervideo.com/jsp/Support.jsp
telephone	510-651-0888